

INTER-AMERICAN DEVELOPMENT BANK

GUATEMALA

**IMPROVEMENT OF MANAGEMENT EFFECTIVENESS OF
THE MAYA BIOSPHERE RESERVE**

Project Document

GU-X1001

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ABBREVIATIONS

ACOFOP	Asociación de Comunidades Forestales de Petén
AOP	Annual Operating Plan
BCC	Cerro Cahuí Protected Biotope
BLT-RE	Laguna del Tigre - Río Escondido Protected Biotope
BZ	Buffer Zone
CATIE	Tropical Agricultural Research and Higher Education Center
CECON	Center for Conservation Studies of the USAC
CIAN	High-level Institutional Committee
COCODES	Community Development Council
COMUDES	Municipal Development Council
CONAP	National Council on Protected Areas
CONARFI	National Commission for Phytogenetic Resources
CONCOFOP	Consultative Council of Forest Communities of Petén
CONTIERRA	Presidential Office for the Resolution of Land Conflicts
COPREDEH	Presidential Human Rights Commission
COREDUR	Regional Urban and Rural Development Council
CZ	Core Zone
ECPIRBM	Strategy for the Participatory and Inclusive Conservation of the Maya Biosphere Reserve
FDN	Fundación Defensores de la Naturaleza
FONAPAZ	National Peace Fund
FONTIERRA	Fondo de Tierra
FORESCOOM	Community Forest Services Enterprise
FYDEP	Petén Development Enterprise
ICACP	Coordinating Body of Campesino Associations of Petén
IDAEH	Institute for Anthropology and History
INAB	National Forest Institute
INGUAT	Guatemalan Tourism Institute
INTA	National Institute for Agrarian Transformation
MARN	Ministry of Environment and Natural Resources
MBR	Maya Biosphere Reserve

MICUDE	Ministry of Culture and Sports
MINFIN	Ministry of Finance
MINUGUA	United Nations Verification Mission in Guatemala
MSPAS	Ministry of Public Health and Social Assistance
MUZ	Multiple Use Zone
PDH	Office of the Human Rights Ombudsman
PDPRBM	Petén Development Program for the Conservation of the Maya Biosphere Reserve
PIOTF	Indicative Plan for Functional Land-Use Management
PNC	National Civilian Police
PNLT	Laguna del Tigre National Park
PNSL	Sierra del Lacandón National Park
PNT	Tikal National Park
ROP	Operating Regulations of the Program
SCEP	Secretariat for Execution Coordination of the Presidency
SECONAP	Executive Secretariat of CONAP
SIGAP	Guatemalan Protected Areas System
SUCHILMA	Sindicato Único de Chicleros y Laborantes del Bosque (Single Union of Chicle and Other Forest Workers)
SUCPG	Coordinating Sub-unit of the GEF Project
UP	Program Unit
UMC	Community Management Units
UMI	Industrial Management Units
USAC	Universidad de San Carlos de Guatemala

I. FRAME OF REFERENCE

A. Location and Background

- 1.1 Created by Legislative Decree 05-90, the Maya Biosphere Reserve is situated in the far north of the department of Petén. It covers 59% of the territory of the Petén and 20% of the territory of Guatemala. As illustrated in Figure 1 of Annex I, the western, northern, and eastern sectors of the MBR border on Mexico and Belize. The size and location of the protected area shape many of the circumstances that affect its management, including its environmental, social, economic, and security conditions. During the 16 years since the MBR was established, the successive governments have undertaken major efforts to conserve the natural and cultural heritage of the MBR. This task has been complicated by the fact that the MBR is characterized by extremely complex conditions where regional public goods (the Petén forest and its biodiversity, and the archeological heritage of the formative and classic Maya periods) combine with the need to address conspicuous external threats (high immigration, high rates of deforestation and forest fires, unprecedented growth, illegal activities, rigid and inadequate legal and regulatory framework, extreme poverty, unsustainable farming, livestock, and logging practices) in the midst of a complex set of actors (social groups, indigenous peoples, urban population, economic groups, environmental NGOs, holders of forestry concessions, atomized institutions) with serious problems of governance. The efforts and resources invested in the area, with very few exceptions such as community-based forestry concessions, have had limited success in engaging the local population in conservation and management.
- 1.2 Accordingly, the Government of Guatemala, through the Secretariat for Executive Coordination of the Presidency (SCEP) and the High-level Inter-ministerial Committee created for this purpose, reached agreement with the Inter-American Development Bank (IDB) on a *Strategy for Participatory and Inclusive Conservation of the MBR* (ECPIRBM). This Strategy will be implemented in part through the *Petén Development Program for the Conservation of the Maya Biosphere Reserve* (PDPRBM) (GU-L1002), financed by US\$30 million IDB loan currently at an advanced stage of preparation. The GEF Project is intended to complement this loan which will lay the foundation for biodiversity conservation by addressing the issues of governance and poverty reduction.
- 1.3 Geographically, the actions of the PDPRBM extend over the entire Department of the Petén including portions south of the MBR, while those of the GEF Project are concentrated in the western part of the Reserve (west of the 90° meridian). Nonetheless, both operations will have an impact on all the zones of the Reserve, in terms of institutional strengthening, policies, regulations, and procedures as well as monitoring and evaluation for adaptive management of the MBR.
- 1.4 The emphasis of the GEF Project in the **zone to the west of the 90° meridian** reflects considerations such as: (i) its biological and ecological importance, including ecosystem and species diversity; (ii) the concentration of protected areas including the two most extensive national parks within the Reserve (Laguna del Tigre and Sierra de Lacandon National Parks), one of which is a declared Ramsar site; and (iii) the level of threat faced

in this portion of the Reserve. These considerations are further detailed in the following sections.

B. Description of the Maya Biosphere Reserve

- 1.5 Extending 2,112,940 hectares, the MBR is the largest protected area of Central America. Along with neighboring parks in southern Petén, Belize, and the Mexican states of Chiapas, Campeche, and Quintana Roo, it constitutes the Selva Maya Forest -- the most extensive tropical broadleaf forest of Mesoamerica. To organize the management of the MBR, Decree 5-90 establishes three types of zones: (i) core zones (CZ) (National Parks and Protected Biotopes; 767,000 ha; 36% of the RBM); (ii) multiple use zones (MUZ) (848,440 ha; 40% of the MBR); and (iii) the buffer zone (BZ) (497,500 ha; 24% of the MBR). The location of each of these zones is presented in Figure 2 (Annex 1).
- 1.6 The **CZs** are at the heart of the MBR. They protect wilderness and archeological areas in which natural processes, including biological evolution, are to continue undisturbed, and where, for ecological, scientific, and cultural reasons there should not be year-round human settlements or agricultural development. They protect genetic pools that are important for restoring species in areas where they have become extinct and they contain places of exceptional scientific interest for the conservation of wildlife and ecological processes. To date the MBR has the following CZs:

Table 1-1. Core zones of the Maya Biosphere Reserve

Core zone	Area (ha)
Laguna del Tigre - Río Escondido Protected Biotope	45,168
Naachtún - Dos Lagunas Protected Biotope	30,719
San Miguel - La Palotada (El Zotz) Protected Biotope	34,934
Cerro Cahuí Protected Biotope	650
Mirador - Río Azul National Park	116,911
Laguna del Tigre (PNLT) National Park	289,912
Sierra del Lacandon (PNSL) National Park	202,865
Tikal (PNT) National Park	55,005
Yaxha - Nakúm - Naranjo National Park	37,160
El Pilar Natural Monument	1,000

- 1.7 Two of these core zones (PNSL and PNLT) have their own internal zoning, which reflects the need to reconcile the presence of human settlements that predate the establishment of the MBR with its conservation objectives.
- 1.8 The **MUZ** is an area set aside for sustainable use, in keeping with the potential of its resources and abiding by the Reserve's conservation objectives. The MUZ is, in turn, divided into the following: (i) *Sustainable Management Units*: This category includes the area where forestry concessions have been granted on the basis of contracts that comply with management plans authorized by Executive Secretariat of the National Council on Protected Areas (SECONAP)¹. (ii) *Biological corridors*: In order to maintain the connectivity of the genetic flow of biodiversity among the CZs, the National Council on Protected Areas (CONAP) established three biological corridors – the first connects the

¹ See paragraphs 1.24 and 1.25 for a description of CONAP and SECONAP.

PNLT to the El Mirador National Park, the second connects the PNT to the Río Azul National Park, and a third corridor connects the PNSL to the PNLT. (iii) *Special Use Zone*: The northern and eastern part of the PNLT includes wetlands and other natural ecosystems which, based on their unique biological characteristics, should be kept under a strict protection regime. Given the difficulty changing the boundaries of the PNLT, CONAP set aside this part of the MUZ as a “Special Use Zone,” which in practice corresponds to an expansion of the PNLT and is recognized as an area of influence of the park. The **BZ** has as its objective relieving the pressure on the MBR by promoting appropriate uses of the land and natural resources in the area adjacent to the CZs and the MUZ, and in light of conservation considerations.

C. Ecological importance of the Maya Biosphere Reserve

- 1.9 The MBR safeguards a diversity of natural ecosystems, many of which are unique and significant regionally due to their uninterrupted extension. It also protects a high diversity of plant and animal species, with over 40 species of mammals, 256 species of resident or migratory birds, 97 species of reptiles, 32 species of amphibians and 55 species of fish. As the heart of the Selva Maya Forest which itself is reported to contain 8-12% of the world’s biodiversity, the MBR performs an important function of connectivity with other neighboring natural areas in Mexico, Belize, and southern Petén. As such, the MBR supports ecological processes upon which species that require large territories, such as the jaguar and the scarlet macaw, depend for their survival. The MBR encompasses 19 ecosystems, 17 of which are considered natural ecosystems, while the other two are considered anthropic ecosystems, i.e. highly modified by man. Lowland dense humid broadleaf forest covers approximately 53.6% of the protected area (11,240 km²) and, while it occurs outside the MBR, it is only within its boundaries that such a large extent of this vegetation type is protected. Of the 17 natural ecosystems, seven are protected exclusively in the Reserve. This includes relict mangroves (the most inland occurrences of mangroves in the Yucatán Peninsula), rare mollusk-based reefs harboring unique assemblages of invertebrates, caves, ‘cenotes’ and the greatest concentration of freshwater wetlands in Mesoamerica. Two sites have been recognized as wetlands of international significance pursuant to the Ramsar Convention – Laguna del Tigre and Yaxha-Nakum-Naranjo National Parks.
- 1.10 With respect to biological endemism, the species endemic to the Selva Maya show three clear patterns of distribution: (i) the Yucatán Peninsula (xerophytes species adapted to dry climates); (ii) the humid forest of Tehuantepec (endemic species associated with lowland tropical forest). The MBR represents the most extensive remnant for endemic species associated with this ecoregion; (iii) Lowland Maya Forest (endemic species found in forests at altitudes of less than 1000 meters). The PNLT for example falls primarily within the Tehuantepec ecoregion and is considered an important reservoir of tropical dry forest habitats and wetlands that harbor biotic communities and individual species of great regional and global conservation value². This includes several rare and endangered species such as Baird’s tapir (*Tapirus bairdii*), jaguar (*Panthera onca*), red brocket deer (*Mazama Americana*), collared peccary (*Tayasu tajacu*), jabiru (*Jairu mycteria*, the largest bird in the Americas), spotted paca and ocellated turkey, great curassow (*Crax*

² A Biological Assessment of Laguna del Tigre National Park, CI Rapid Assessment Program. CI and others. July 2000.

rubra) and crested guan. It also provides critical habitat for the scarlet macaw (*Ara macao*) offering the best conditions for its growth and reproduction. Endemic species include the Morelet's crocodile (*Crocodylus moreletti*), the Central American river turtle (*Dermatemys mawii*) and the 'pez blanco' (*Petenia splendida*). Many of the species present are on the IUCN Red List.

- 1.11 During project preparation an evaluation was done of the **ecological integrity and connectivity** of the MBR based on the methodology developed by The Nature Conservancy (TNC) and the PROARCA/APM Project, which aims to determine whether the protected areas of Central America are meeting their conservation objectives³. Three criteria were used to assess the status of the core zones, the forest management units and the biological corridors: (i) the degree of connectivity displayed by the area; (ii) the occurrence of fires in the area in 2005; (iii) percentage land use change between 1986 and 2004. In the MUZ, less than 4% of the area covered by forest management units was observed to have a poor level of ecological integrity (while 96% had levels either good or excellent). This same methodology was applied to estimate the ecological functionality and integrity in the biological corridors of the MBR. Using the criteria mentioned above, the Tikal Mirador Rio Azul Biological Corridor was found to have an excellent level ecological integrity, the Mirador Rio Azul- Laguna del Tigre Biological Corridor had a good level of ecological integrity and the Laguna del Tigre-Sierra de la Lacandon Biological Corridor was found to have a poor level. These results along with several ecological assessments undertaken in recent years⁴ indicate that while the MBR encompasses among the last remaining large tracts of the Selva Maya, the Reserve's forests and wetlands are under increasing pressure from fragmentation and habitat loss.
- 1.12 The **cultural importance** of the MBR dates back to the times when the territory was the main settlement of Mayan populations from approximately 2000 B.C. until the 10th century A.D., when the great ceremonial centers were abandoned. In addition to the archaeological sites of Tikal and Yaxha the major complex found north at El Mirador, is considered the summit of the Maya civilization. The living cultures of the MBR are also significant and include the Maya-Itzá group and the ladino culture of Petén, both traditionally related to the forest, as well as the spiritual values of the recently-arrived Maya-Q'eqchi'. This combination of natural and cultural heritage has won worldwide recognition of the importance of the MBR, as it has been included among the 391 "Biosphere Reserves" officially recognized by UNESCO. Among these, the MBR is one of only seven reserves that include both a World Heritage Site (the Tikal National Park) and wetlands on the Ramsar List in view of its international importance (the Laguna del Tigre wetland and the Yaxha-Nakum-Naranjo wetland). The department of Petén has had a unique experience of a protected area requested, established, and administered by a local indigenous community. The area called Itzá Biological Reserve (Bio-Itzá) is located mostly within the BZ, and a section to the north is part of the MUZ, but its unique location makes it a regional biological corridor.⁵ At the urging of Bio-Itzá, CONAP recently approved the name "Indigenous Community Reserve" for this area, valuing it as

³ Análisis de las Amenazas y Causas Intrínsecas de la Pérdida de Biodiversidad en la RBM. Abt. Associates Inc. IRG. 2006

⁴ A Biological Assessment of Laguna del Tigre National Park, CI Rapid Assessment Program. CI and others. July 2000.

⁵ Asociación Bio-Itzá. Technical study Bio-Itza Community Reserve. ProPetén/GEF, 2004.

a form of organization replicable in other areas under community administration and management in Guatemala.

D. Environmental Goods and Services of the MBR

- 1.13 In addition to its ecological and cultural importance, the MBR provides environmental goods and services that yield local, regional, and global benefits: (i) **Goods**: The extraction of non-timber species with high commercial value such as xate palm, pepper, and chicle resin, generate more than US\$6 million annually; in 2000, legal and planned logging generated employment for 38,000 workdays and gross income of 7.5 million Quetzals. (ii) **Knowledge**: The MBR offers great possibilities for scientific research into natural resources, cultural resources, and social relations with the environment; (iii) **Carbon Sequestration**: the MBR, with a total area of 2,112,940 ha, has major capacity for carbon sequestration from the atmosphere. A study carried out in five community forest concessions⁶ indicates a potential reduction of emissions of 716,061 Mtce⁷ in an area of 120,858 ha.; (iv) **Freshwater ecosystem conservation**: The freshwater ecosystem of the Petén is complex, consisting of poorly drained, lowland swamp forests with extensive grassy wetlands, alternating with regions of karstic hills.⁸ Rainfall occurs all year with two distinct peaks in June-July and September-October. The first peak, however, is not reproduced by surface streams and rivers as the large limestone groundwater reservoirs are filling and it is not until the second peak that groundwater overflows into the wetlands. Rainfall decreases from South to North and the evapotranspiration potential and root system of the forests in the Northcentral and Northeastern portions of the RBM keep the flooding to lower levels than the low vegetation of the Northwestern wetlands. Vegetation cover also slows erosion and karstification and is an important factor in maintaining the balance of the freshwater ecosystem; (v) **Ecosystems and natural landscapes for tourism**: The presence of both biological and archeological resources accounts for the MBR's high potential for scientific, nature-based and adventure tourism. An economic valuation undertaken of the PNLT in 2004 illustrates the global value of the environmental goods and services generated by one specific area within the MBR.⁹ The study estimated at US\$282 million the global value of the conservation unit (based on the existing management framework).

E. Socioeconomic context

- 1.14 Petén experienced significant economic growth based on the extraction of chicle during the first half of the 20th century. In 1959 the Empresa de Fomento y Desarrollo de Petén (FYDEP) was established for the purpose of effectively integrating the Petén into the national economy, giving impetus to its colonization and development. That same year untitled land located in the department of Petén was registered as government land, creating two large nationally owned properties. The colonization process started in earnest in 1964, changing abruptly the demographic and economic structure of the Petén.

⁶ Propuesta de Proyecto para Cinco Concesiones Forestales Comunitarias en la Reserva de la Biosfera Maya, Petén, Guatemala. Report prepared by the OCIC Advisory Group for the United States Agency for International Development, Contract 596-0-00-00056-00. September 18, 2000.

⁷ Metric tons carbon equivalent.

⁸ Vreugdenhil, D., et al. Map of the Ecosystems of Central America, Final Report. World Bank, CCAD, World Bank-The Netherlands Partnership. Washington, DC, 2002.

⁹ Economic valuation of the Laguna del Tigre Conservation Unit. 2004. CONAP.

In the north of Petén the extractive industry lost importance due both to the depletion of resources and the introduction of synthetic substitutes for chicle. The logging industry developed locally, in part due to the clearing of roads throughout the southern part and agriculture expanded over southeast Petén. It is against this backdrop that Decree 4-89 or the Law on Protected Areas and its amendments, and Decree 5-90 created the MBR in the department of Petén without considering human presence in the area, the lengthy history of population, occupation, management, and use that several communities had made of specific areas of the MBR. This contributed to a history of conflicts between the CONAP and the population settled in the MBR, a situation that persists to this day (see threats).

- 1.15 An estimated total of 85,000 people live in the MBR, of which an estimated 13,000 to 20,000 live in the core zones¹⁰. The PNSL and the PNLT both encompass communities and cooperatives established during the “colonization process” promoted by the Guatemalan Government beginning in the 1960s and more recent settlements established along the route to El Naranjo when the oil companies built the access road to the oil camps located in the PNLT. There are communities as old as Paso Caballos, which has existed since the 1930s, and Santa Amelia, which originated as a chicle-harvesting camp. All the communities grow corn or maize as their main crop, using shifting “slash and burn” cultivation. Beans, pepitoria (a form of squash) and a small amount of rice are also grown. The PNLT shows the consequences of a new round of concentration of farm property, mainly by landowners and cattle ranchers, who illegally take possession of large extents of land, after an initial advance by settlers who clear the forest. The penetration and expansion of drug trafficking and other illegal activities in the PNLT has become evident in the last five or six years, making the situation more complex.
- 1.16 In the El Naranjo corridor, some 2.3% of the households recognize that, in addition to agriculture, they hunt, and 1.1% supplement their income by extracting xate, and all have poultry, swine, and in some cases Peligüey sheep. While incipient, livestock production is expanding and encroaching on the PNSL with over 5,000 head of cattle reported along the El Naranjo corridor in 2001. Approximately 39% of the households supplement their income with wage work, and go to El Naranjo as a commercial center. The official opening of the Mexico border crossing at El Ceibo and the consent of the CONAP to the permanent presence of the merchants established in the area has helped defuse the conflict that existed with respect to the road up until 2003 and the pressure of agricultural activities on the PNSL would appear to be reduced as a result of the increase in commercial activities in this area.
- 1.17 A total of 15 forestry concessions are located in the MUZ, covering a total of 560,000 ha, with a natural forest cover close to 98%. The forest harvest directly benefits approximately 7,000 persons who are members of 1,300 families. Of these 15 forestry concessions, 13 are community concessions and two are industrial. The community concessions have 1,309 members, represented by the Asociación de Comunidades Forestales de Petén (ACOFOP), but not all of them or their families live within the MBR, except for the communities of Uaxactún, Carmelita, Cruce La Colorada, La Colorada, La Pasadita, and San Miguel La Palotada. In the Community Management Units (UMC),

¹⁰ See Annex H: ‘Analysis of Social Aspects of the MBR’ for a more detailed description. Estimates vary depending on the source.

the harvesting and management of timber and non-timber resources is allowed, mainly xate, chicle, pepper, pita floja (*Aechmea magdalenae*), and bayal (*Desmoncus ferox*); while in the Industrial Management Units (UMI) only the harvesting of timber resources is allowed, though the CONAP may issue permits to third persons to harvest non-timber resources. Over 90% of concessions and the territory they encompass have received a forestry certification and have maintained their certified status. Each year, satellite imagery confirms that the portions of the MBR covered by concessions are the least impacted by forest fires, in large part as a result of management practices. Other major accomplishments have included improved land use planning, a reduction of conflicts over the use of resources and land tenure, and reduced pressure from the advance of the agricultural frontier. Nonetheless, the concession process is relatively new (the oldest concession dates from 1994 and the most recent from 2002) and several evaluations recommend that actions be taken consolidate the UMCs, particularly by strengthening the administrative, accounting, and entrepreneurial capacities of concessionaires, supporting the integrated management and sustainable use of the reserve's goods and services and standardizing and improving the legal basis of the concession contracts¹¹. Other recommendations have included placing emphasis on: (i) the sustainability of the model in the medium to long-term; (ii) the measurement of impact indicators; and (iii) non-wood products and community-based ecotourism.

- 1.18 **Tourism.** Tourism is an economic sector that is growing in importance particularly in the central portion of the Reserve. In this zone, Tikal National Park currently receives 215,629 visitors each year and these numbers are expected to reach 310,000 visits in 2015. The Yaxhá-Nakum-Naranjo National Park currently draws some 15,000 visitors per year with numbers expected to reach 174,000 visitors yearly in part as a result of intense promotion in the international media. The southern portion of the MBR includes two additional, albeit smaller, tourism centers. The first one is situated around the Ceibal and Aguateca sites (these two sites receive 11,000 visitors annually). The second is situated in the Eastern corridor, around Ixcún, which receives 1,600 visitors annually, mainly Guatemalans. Though it has major sites such as Mirador, the northern portion of the MBR does not have suitable infrastructure for competing internationally. There are nonetheless community-based initiatives underway which demonstrate the potential for ecotourism. In terms of the economic impact of the sector, estimated revenues from tourism in the Petén overall were US\$14 million in 2004. Revenues from Tikal National Park were US\$1 million. The direct employment generated (i.e., hotels, restaurants, guides) is estimated at 10% of total employment in major towns such as Flores and Santa Clara.
- 1.19 At present, the main social conflicts in the MBR revolve around local perceptions of four issues: (i) the establishment of human settlements in the protected areas, their permanence, and harvesting the natural resources within them; (ii) the possible development of the so-called Mirador Basin Project; (iii) promotion of oil exploration and exploitation; and (iv) opposition to the potential construction of hydroelectric plants along the Usumacinta river. In addition, within the MUZ, several of the communities established along the road from Flores to Melchor de Mencos continue to demand

¹¹ Forestry Concessions: A Successful Model. Final report of the BIOFOR Project. USAID. March 2006. Summary of the legal framework for concession contracts. APESA final report. IDB 2006.

regularization and legalization of their plots which, according to Decree 5-90 cannot be titled to private persons since they are located in the MUZ. CONAP considers this request to be valid and solutions are being sought. Other notable efforts in resolving conflicts within the MBR have included the Cooperation and Relocation Agreements signed by the CONAP and 19 communities in 1997 and 1998; the Community Relations Strategy for the PNSL, reviewed in 2004 and validated by the 2005-2009 Master Plan for the PNSL; and the Interinstitutional Letter of Understanding signed with the Mechanism for Coordination of Associations of Campesinos of Petén and other governmental institutions (CONTIERRA, PDH, COPREDEH) promoting the resolution of land conflicts in different conservation units and signed November 7, 2005.

- 1.20 The population located in the MBR can be grouped in five major sectors: (i) human settlements established within or that impact on the PNSL (13,766 persons); (ii) human settlements established within or that impact on the PNLT (7,415); (iii) communities established within or that impact on the MUZ (10,193); and (iv) communities established in the BZ including along the road to Melchor de Mencos; and (v) the municipal *ejidos* (46,794 persons). This population represents a wide variety of cultures including: (i) *Ladinos from the eastern region of Guatemala*, who have a campesino culture shaped by a tradition of livestock raising; (ii) *Ladinos from Petén*, who have a culture well-adapted to the environment of Petén, such as gatherers of latex for chicle, gatherers of ornamental palms, etc.; (iii) *Maya-Itzá*, the only ancestral indigenous peoples of northern Petén; (iv) *Q'eqchi'*, the largest-ranging Maya people, with some knowledge of the management of moist tropical resources; and (v) *other communities of Maya peoples such as the Achi'* of Baja Verapaz, *Ch'orti'* of Chiquimula, *Mam* and *Q'anjob'al* of Huehuetenango, *Poqomam* of Jutiapa, etc¹².

F. Legal and institutional framework

- 1.21 Of the many laws applicable to the MBR, only a few play a preponderant role: (i) the Constitution of the Republic of Guatemala, where Article 15 of the Transitory and Final Provisions states that it is a matter of “national urgency to foster the economic development of the department of Petén for its effective integration to the national economy”; (ii) Decree 5-90, which established the Reserve and its delimitation and administration; (iii) the Law of Protected Areas (Decree 4-89 and its Amendments) and its Regulation (Executive Decree 759-90); (iv) the Emergency Law for the Defense, Restoration, and Conservation of the PNLT (Decree 16-2004); (v) the Law that declares as a matter of national urgency the protection, conservation, and restoration of the CZs of the MBR, and of the MUZ and BZ (Decree 87-96); and (vi) the Executive Decree establishing the Authority for the Management and Sustainable Development of the Lake Petén Itzá Basin (Executive Decree 697-2003). In addition, several international treaties and conventions ratified by Guatemala apply to and have an impact on the MBR, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora; the Convention on Biological Diversity; and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat. The legal analysis undertaken for the

¹² A socio-cultural analysis undertaken during the preparation of the program showed that the ancestral peoples of the MBR (the Itza) are concentrated in the municipality of San Jose with communal land located in the Bio-Itza reserve. In other municipalities, indigenous peoples (Q'eqchi, Ch'orti and others) have migrated from southern parts of Guatemala in recent decades.

preparation of this Project concluded that the main issues associated with the legal framework were the lack of enforcement of existing laws as well as a general sense of frontier-lawlessness characteristic of the region.¹³ Few violations are brought to justice and cases such as illegal encroachments on the national parks are greatly impeded by the fact that most of the protected areas are not officially registered in the General Land Registry, leading to protracted cases in court. Other weaknesses include limited public awareness of environmental regulations (particularly with respect to natural resource use), a perceived lack of transparency in official matters, limited enforcement personnel and skills base, and the need to promote broader participation in monitoring compliance to laws and regulations.

- 1.22 The MBR has a Master Plan for 2001-2006 that has been approved through Resolution ALC 031/2001 and that is the main document for its management over the medium term. The Master Plan presents the zoning established by Decree 5-90 and establishes 16 strategic objectives for conservation and management, ranging from forest fire prevention and reducing the impact of cattle ranching to strengthening inter-institutional coordination and promoting co-management regimes. Given its broad, all encompassing view, the main challenge in implementing the Master Plan has been in setting realistic targets in light of the rapid land use change occurring in the MBR and existing capacity for management. Significant gaps have developed between the official zoning and actual settlement patterns in the core zones. The Master Plan is being updated with plans to have come into effect in 2007. The new Master Plan is expected to place more emphasis on achievable targets that can be closely monitored and institutional capacity building. Other lessons learned from the Master Plan have been that there are significant linkages between the various zones (the CZ, MUZ, and BZ) and that these cannot be managed independently. Instead, a coherent strategy is needed to divert pressure away from the core zones by providing sustainable economic opportunities in southern Petén and in the buffer zone as well as sustainable natural resource use compatible with ecosystem management in the MUZ. Another lesson learned has been that mechanisms are needed to build consensus on sustainable use of biodiversity in the vicinity of core zones. The proposed GEF project builds on these lessons learned and is designed to support the implementation of the updated Master Plan.
- 1.23 In addition to the Master Plan, CONAP has issued several policies that bear on the management of the MBR including ones for the co-administration of protected areas, use and management of non-timber forest products, and ecotourism in protected areas. In all cases, the implementation of these policies requires close coordination among many government institutions as well as support from the private sector and civil society. Of particular relevance to the MBR, the Policy on Human Settlements in Protected Areas of Petén, approved in September 2002 includes provisions to 'regulate' settlements in 'restricted use zones' within the core zones in accordance with land use plans that are adapted with the specific conditions of each site and with the responsible participation of residents in managing resource use.
- 1.24 The main institutions with management responsibilities in the MBR are: the National Council on Protected Areas (CONAP) and its Executive Secretariat (SECONAP), the

¹³ See Annex J. Legal and Institutional Analysis.

Ministry of Culture and Sports (MICUDE) with its Institute of Anthropology and History (IDEAH), the Ministry of Environment and Natural Resources (MARN) and the Guatemalan Institute of Tourism (INGUAT). CONAP, a public entity dependent directly of the Presidency, has among its main functions to promote conservation of the country's natural heritage, oversee the national system of protected areas (SIGAP) and implement the National Biodiversity Conservation Strategy. The Council is presided by MARN and includes representatives from the Center for Conservation Studies of the University of San Carlos (CECON), a delegate from environmental non-governmental organizations, the Association of Municipalities, INGUAT and the Ministry of Agriculture (MAGA). Several other entities such as the Ministry of Energy and Mines, the Ministry of Defense, CONTIERRA¹⁴, and the municipalities have incidence on the MBR, adding to the complexity of its management. Sectoral policies are often contradictory, jurisdictions are overlapping and overall coordination is weak.

- 1.25 SECONAP is the entity that administers the MBR. It has a Regional Office located in Santa Elena, Petén. Its operational capacities are limited by a regular budget of about US\$1.78 million annually, which represents only 30% of the optimal budget estimated by the regional office of SECONAP to ensure effective management of the MBR. Of this total, 70% is earmarked for the administration of the MBR, 24% to protection and restoration of the PNLT, and the rest (6%) to promoting the stewardship fund (*Fondo Patrimonial*) for the Yaxha-Nakum-Naranjo Park. Of the total budget, over 60% is earmarked to personnel leaving little funds for other recurrent costs or investments in monitoring, research or restoration of biological resources. According to the 2005-2008 multiannual program of the Technical Bureau of the Budget of the Ministry of Finance (MINFIN), SECONAP's budget has seen an annual increase of approximately 6%, and equivalent increases for the MBR can be expected. While a personnel of over 370 people is assigned to the MBR, the staff is unevenly distributed across the Reserve and has limited technical capacities (see Table 2).
- 1.26 Decree 5-90 recognizes the CECON of the University of San Carlos as the administrator of the Laguna del Tigre, Naachtum Dos Lagunas, San Miguel La Palotada, and Cerro Cahú Biotopes; and it recognizes the Institute for Anthropology and History (IDAEH) as the administrative entity of the Tikal National Park (PNT). The administrative functions of SECONAP imply both direct responsibility in the CZs, the MUZ, and the BZ, as well as the possibility of delegating the administration of these territories through co-administration, concession, or agreements for carrying out specific programs. In this context, the Foundation Defensores de la Naturaleza co-manages PNSL under an agreement with SECONAP and the BALAN Association co-manages Mirador-Rio Azul National Park.
- 1.27 Following approval of the Policy on Human Settlements (see above), the regional office of SECONAP-Petén took steps to establish a Community Relations Unit that was given a mandate to resolve conflicts over land and resource use in zones as defined by the policy

¹⁴ Created through government agreement 452-97, CONTIERRA is the national entity charged with facilitating and supporting, at the request of parties, the conciliatory or judicial resolution of conflicts that present themselves in association with the property rights of land. Petén is the department that has the greatest number of cases submitted to CONTIERRA.

and re-activate or develop Cooperation Agreements¹⁵ with communities willing to participate in management of the MBR. Nonetheless, budgetary limitations and the lack of institutional support for the policy have limited its full implementation to the point that the Unit eventually disappeared as a department of SECONAP.

- 1.28 CONAP's Center for Monitoring and Evaluation (CEMEC), with offices in Flores, Petén is responsible for maintaining updated data bases on socioeconomic, ecological, and biological characteristics of Petén. CEMEC facilities are currently co-managed on the basis of a collaborative arrangement between SECONAP and the Wildlife Conservation Society (WCS). Of note, SECONAP established in November 2005 a new Monitoring and Evaluation Unit as an independent unit responsible for monitoring key indicators in all protected areas. Table 2 summarizes the capacities of SECONAP and other entities operating in Petén.
- 1.29 Politically and administratively, the department of Petén is divided into 12 municipalities, five of which have part of their territory in the MBR. According to an assessment undertaken for the PDPRBM (GU-L1002), these local governments are weak in their administrative, technical and financial capacities and have had limited participation in the management of the natural and cultural assets within their territories. The Municipality of San Andres has established agreements with communities for preventing and fighting forest fires in the PNLT; however their effectiveness has been limited.¹⁶ Decentralization and municipal development laws approved in 2002 include provisions for a system of Development Councils at the national, regional, departmental, municipal and community levels. Community Development Councils (COCODES) have been established in the MBR with the function of promoting projects prioritized by communities. While still incipient, this structure provides an opportunity to engage local residents in micro-projects in sustainable use of biodiversity.
- 1.30 Several international, national and local NGOs are active in conservation initiatives in the MBR. Conservation International (CI) helped establish ProPetén in 1991 which currently works with local communities to conserve biological diversity by increasing environmental awareness and by developing economic alternatives for local communities. ProPetén administers the 'Estacion Biologica las Guacamayas (the Scarlet Macaw Biological Research Station), a field station located within PNLT that serves as the main center for scientific studies and training in the MBR.

¹⁵ Instrument of the Human Settlements Policy for Protected Areas of the Petén, which defines rights and responsibilities of communities under mechanisms established by SECONAP.

¹⁶ The State of Conservation of PNLT. Tropico Verde, 2003

Table 2. Capabilities of SECONAP and other institutions in Petén

Conservation Unit	Centers of administration	Personnel			
		Technical	Administrative	Operative (*)	Total
Total Petén Region	21	29	50	334	413
Total MBR	19	24 (**)	46 (***)	304	374
Total by Zones					
Sierra del Lacandón National Park (****)	6	8	5	38	51
Laguna del Tigre NP	6	3	1	75	79
Yaxha NP	1	2	1	20	23
Naachtum Dos Lagunas Biotope	1	1		10	11
Mirador Río Azul NP	1			11	11
MUZ-BZ, other areas	2			70	70
Tikal NP	2	10	39	80	129
<p>(*)90% of the operational personnel are Resource Rangers, though the figures include cooks and, in the case of Tikal, maintenance staff. (**) 13 from SECONAP, the rest from the FDN and IDAEH in Tikal. (***) 10 from SECONAP the rest from FDN and IDAEH in Tikal. (****) The technical-administrative personnel of the Sierra del Lacandón NP includes mainly the contracting of the Fundación Defensores de la Naturaleza, which is the co-administrator entity for the area; it has an administrative office in Santa Elena, Petén.</p> <p><u>Supplemental notes:</u> → The regular public budget that the Executive Secretariat of CONAP allocates annually to Region VIII, Petén is US\$1.7 million, equivalent to 38% of the total budget of the Executive Secretariat. → Of the total budget for the Region, about US\$200,000 is allocated by la SECONAP to the PNSL. FDN allocates, for the operation of the PNSL nearly US\$650,000, which, added to the allocation by SECONAP, comes to US\$850,000 for operations. FDN estimates a deficit for operations of US\$200,000 (without investment). → FDN estimates that 70% of the total budget for the PNSL is earmarked for community relations and the rest goes directly to conservation activities.</p>					

G. Conformance to regional and national plans

- 1.31 Nationally, the current government has attributed special importance to environmental issues in its proposals regarding rural development (Strategic Agenda for Integral Rural Development in Guatemala), on national competitiveness (National Agenda on Competitiveness), and in its Guate Verde program. Guatemala is also a signatory to the International Convention on Biological Diversity and has had a National Strategy for Biodiversity Management since the late 1990s. An important part of its strategy has been the creation of its national system of protected areas (SIGAP) administered by CONAP and of which the MBR represents approximately 75%. The SIGAP establishes Conservation Regions that help optimize the allocation of knowledge and resources within the system and promote the replication of lessons learned throughout the system. The actions to be financed by this Project are consistent with the policy and strategic lines of SIGAP and incorporate the results of recent evaluations. In addition, the components of the proposed GEF Project fit within the objectives of the Regional Strategy for the Conservation and Sustainable Use of Biodiversity in Mesoamerica endorsed by the Central American Commission for Environment and Development (CCAD).
- 1.32 As part of the process of preparing the PDPRBM (GU-L1002), a *Strategy for Participatory and Inclusive Conservation for the MBR* (ECPIRBM) was formulated and approved by the Government of Guatemala. The Strategy develops four strategic lines as follows: (a) participatory and inclusive conservation, with a focus on providing market opportunities for the local population as incentives for the sustainable use and management of natural and cultural resources consistent with the legal and regulatory

framework in place in the MBR; (b) strengthening of governance, particularly in support of decentralization, enhanced institutional coordination and transboundary cooperation with Mexico and Belize; (c) cultural and environmental management, with a focus on maintaining the ecological and cultural integrity of the MBR, and (d) sustainable production, with a focus on the ZUM and the ZAM. The strategic lines have differentiated approaches based on the particular characteristics of the different zones of the MBR. The proposed GEF Project was designed to support the strategic lines of the ECPIRBM, and as such is consistent with the Government of Guatemala's overall vision for the MBR.

H. Threats and Intrinsic Causes of Loss of Biodiversity

- 1.33 The predominant threats to the biodiversity and ecological integrity of the MBR are as follows:
- 1.34 **Fires:** Fires and their effects on natural vegetation cover and associated fauna are closely monitored in the MBR. The most critical year in recent times was 1998, when the area affected by fires covered 440,000 ha. In 2003, CEMEC reported that 398,000 ha of forests and/or wetlands were burned or approximately 19% of the total area of the MBR. In the PNLT alone fires affected more than 40% of the total area.¹⁷ While the frequency of fires is closely associated with cycles of droughts, other human-related factors such as unsustainable land use practices also contribute to the threat.
- 1.35 **Conversion to unsustainable agricultural uses:** The agricultural frontier is rapidly advancing in the MBR, placing direct pressure on the core zones and biological corridors. An estimated 10% of the total area of the MBR was converted to agricultural uses between 1986 and 2004. Conversion rates were significantly higher in the cores zones (6%) than in the MUZ (2%). The expansion of agricultural uses has followed road corridors in the vicinity or within PNSL and PNLT such as the corridors to Naranjo and Bethel. Unsustainable practices such as cattle ranching and the use of agrochemicals are prevalent along these corridors, leading to encroachment on forests and potential contamination of aquatic ecosystems.
- 1.36 **Unplanned human settlements:** Along with the advance of the agricultural frontier, population growth and immigration to the Peten further threaten the ecological integrity of the MBR. Population growth is estimated to be 7% to 10% per year, largely due to the immigration of poverty-stricken farmers from the highlands to the south. The situation is particularly alarming in PNLT, where the number of settlements grew from 13 communities in 1999 to 42 communities¹⁸ and numerous smaller agglomerations in 2003, leading to increased land use conflicts, contamination due to the absence of solid and liquid waste management, illegal activities such as poaching and illegal logging, and other related threats. Rapidly changing land use has widened the gap between the official zoning scheme for the Reserve as established in the 2001-2006 Master Plan and reality on the ground, further aggravating conflicts over land and resource use. The general lack of security, particularly in the border zones, adds to the potential conflicts and difficulties in enforcing zoning regulations.

¹⁷ Monitoring of Forest Fires and Estimates of Surfaces Burned in the MBR, 2003. WCS, IRG, CONAP/CEMEC.

¹⁸ The Status of Conservation of the Laguna del Tigre National Park. Tropicico Verde. 2003

- 1.37 **Oil industry:** Petroleum development constitutes an additional challenge for biodiversity in the MBR, particularly for PNLT where rights to explore for petroleum have been granted in approximately 55% of the area. While this is an economic necessity for the country and the direct effects of the operations are unknown, an analysis of tissue samples of two species of fish in PNLT showed evidence that individuals collected close to one of the oil wells and at varying distances were stressed, possibly due to exposure to contaminants such as heavy metals, chlorinated hydrocarbons, arsenic and other compounds.¹⁹ The oil industry has also led to the creation of roads into previously unsettled areas and the lack of control further contributed to the conversion of natural ecosystems.
- 1.38 These threats are consistent with those identified in the 2001-2006 Master Plan. They reflect the weakness of the existing governance structure and the conflicts that arise when natural resources of high economic value such as petroleum, coincide with areas of high biodiversity and environmental value. The analysis undertaken during the preparation of this project confirmed that these threats are also the result of several inter-related causes related to socioeconomic conditions, policy issues and institutional capacity.
- 1.39 **Marginalization of the population and insecure rights to land and resource use:** Poverty is prevalent in the MBR, as evidenced by the reliance on subsistence agriculture, limited or non-existent access to basic services, illiteracy rates and absence of secure land and resource use rights. Socioeconomic surveys conducted in the region have highlighted the important influence of poverty and food insecurity on land use strategy²⁰ and have concluded that farmers ability to reduce pressure on forested areas through the adoption of more intensive (and sustainable) practices is constrained by weak market conditions and prices, low levels of farmer organization, lack of secure land and resource use rights, and limited sustainable alternatives livelihoods. Clarifying land and resource use in and around the MBR is fundamental in addressing this cause.
- 1.40 **Absence of fully endorsed integrated conservation strategy with a regional vision:** While considerable funds have been invested in conservation initiatives in the last decade, they have tended to be undertaken in isolation without a view to the overall socio-ecological integrity of the MBR. Land use and management plans, where they exist, have had limited support from local stakeholders, including municipalities. While information exists on the status and trends within the MBR, it has not been used effectively to develop management strategies that adapt to the changing conditions of the Reserve.
- 1.41 **Poor coordination and regional development policies that are incompatible with the conservation of biodiversity:** Coordination among institutions responsible for specific sectors (agriculture, energy, tourism) has been absent, limited or even contradictory often leading to conflicting stances on how resource management and development should take place in the MBR. Underlying economic private and public interests (e.g., cattle ranching, petroleum production) have driven the formulation of policies that do not mainstream biodiversity conservation. While several cooperation agreements exist

¹⁹ A Biological Assessment of Laguna del Tigre National Park, CI Rapid Assessment Program. CI and others. July 2000.

²⁰ Food security and land use deforestation in Northern Guatemala, Avrum Shriar, Food Policy. 2002.

between institutions with jurisdiction over the MBR (such as the agreements between local governments and communities for fire prevention and control), there is limited capacity to ensure compliance with these agreements.

- 1.42 **Insufficient resources and capacities for biodiversity conservation.** The limited operational capacity of the Regional Office of SECONAP in Petén is not sufficient for it to adequately administer the MBR. Training, technical assistance and awareness-raising efforts within the office are still weak, limiting the possibilities of working systematically to manage the Reserve as an integrated system. As a result, its capacity to exercise adequate control and surveillance of the MBR (including the prevention and control of forest fires), to follow-up on plans, solve land-use conflicts that arise, including the legal processes for recovering illegally occupied territories, as well as expedite administrative procedures faces severe constraints that, when combined, threaten the ecological integrity of the MBR, particularly in the CZ and biological corridors. The presence of SECONAP and other institutions across the Reserve tends to be sporadic.²¹
- 1.43 **Lack of a sustainable source of financing for biodiversity conservation:** As mentioned above, SECONAP's budget represents about a third of the funds needed for effective management of the MBR. With few exceptions, conservation initiatives depend primarily on external project financing that cannot support the recurrent costs of routine management functions such as monitoring, fire prevention and control and surveillance. This dependency of external sources acts as a disincentive for the cash-strapped Government to assume its responsibilities for financing—at least in part—the management of the MBR. In addition, the centralized administration of the scarce resources hinders local participation and management adapted to the social and biophysical conditions. The Stewardship Fund (Fondo Patrimonial) created for Yaxha National Park demonstrates how mechanisms can be established to fund conservation activities with the active participation of the private sector and other local stakeholders.

I. Project Strategy

- 1.44 The Project recognizes that the ecological integrity of the MBR as a critical part of the Selva Maya will depend on a substantial improvement of its management effectiveness. To this end, the Project strategy has several important features including: (i) a regional approach that places the MBR within a broader context of the Department of Peten and addresses the root causes of biodiversity loss such as poor coherence in sectoral policies; (ii) a focus on participatory conservation with the aim of municipalities and communities settled in the MBR becoming, instead of a threatening element, allies of the MBR; (iii) self-reliance with an emphasis on the horizontal transfer of knowledge and experience among communities and user groups so that they can manage their territories and resources while also reducing conflicts and improving the quality of life of their inhabitants; (iv) consolidating and expanding the network of co-administrator

²¹ In an evaluation of management effectiveness based on the methodology designed by WWF and the World Bank, only PNSL and Mirador-Rio Azul National Park received moderate ratings (70% and 68.49% respectively). Five of the core zones received ratings of 50% or lower. The high ranking given to PNSL was attributed to the co-management regime in place with the Foundation Defensores de la Naturaleza. The Laguna del Tigre-Río Escondido Protected Biotope received the lowest ranking (31.33%), confirming the need to extend management arrangements to other units.

organizations in specific parts of the MBR; (v) capacity building and the promotion of institutional leadership that make it possible for the administrators of the MBR (SECONAP and others) to handle the different situations that stem from the direct and indirect influence of the communities settled in or around the MBR; (vi) land use management to ensure a balance between the activities for fostering sustainable production and those associated with protection for the zones of high biological importance; and (vii) monitoring and evaluation of the Project and of the situation of the MBR. These features coincide with the strategic vision of the Government of Guatemala for the MBR as presented in the Strategy for Participatory and Inclusive Conservation (see paragraph 1.32).

- 1.45 The project has also been formulated in accordance with the GEF Focal Area Biodiversity and the Operational Program # 3 Forest Ecosystems, with the aim of: (i) improving the enabling environment for enhancing management effectiveness of the MBR, thus helping it fulfill its purposes of conserving globally important biodiversity and maintaining the ecological integrity of the Selva Maya; (ii) seeking the sustainable use of forest ecosystems through co-management combining production, socio-economic and biodiversity goals; (iii) replicating successful outcomes derived from effective stakeholder partnerships and the experience and learning gained. Similarly, the project is in conformity with the GEF strategic objective BD-1: Catalyzing Sustainability of Protected Areas, established in the GEF Strategic Business Plan. The main reason for choosing exclusively this strategic priority relies in the main purpose of the project, which is to strengthen the ecological integrity and connectivity of the MBR, taking into account that the reserve represents 75% of the national system. Given this coverage, the Project is designed to improve management effectiveness of the MBR as an individual PA while simultaneously having a significant impact on management effectiveness of the national PA system. To foster management effectiveness, the project will support activities eligible under SO1 such as: (a) system capacity building for long-term sustainability in terms of the development of a coherent set of sectoral policies and norms; (b) institutional capacity building of SECONAP and partners with an emphasis on co-management for biodiversity conservation; (c) innovative financing mechanisms at the system level; and (d) catalyzing the engagement of communities in biodiversity conservation, including monitoring and evaluation. In addition, there is a strong system-wide lesson sharing and replication element proposed through the national PA monitoring and evaluation unit in SECONAP (USEC). Contributions to the GEF's strategic targets for biodiversity will be documented through the GEF BD-1 Tracking Tool (see Annex E). The project also responds to the Strategic Plan for the Convention of Biological Diversity (CBD) and its design complies with the ecosystem approach principles, as defined in decision VII/11.
- 1.46 Cost-effectiveness is inherent to the Project's strategy, as it is designed around entities already operating in the MBR such as the SECONAP Monitoring and Evaluation Unit and CEMEC (USEC/CEMEC) and it optimizes the allocation of human resources through co-management. It also provides for cost-sharing in project administration with an execution scheme that is fully integrated with the IDB loan for the PDPRBM.

J. Coordination with other projects of the Bank, regional financing institutions, the GEF, and other donors

- 1.47 During Project preparation, an analysis was undertaken of the different initiatives in natural resources management in the MBR over the last 10 years, to avoid duplication of efforts and build on lessons learned. Collaboration with other projects of the Bank, regional financing institutions, the GEF, and other donors is briefly described below.
- 1.48 ***Inter-American Development Bank.*** The GEF Project responds to the IDB Country Strategy for Guatemala for the period 2004-2007, which has poverty reduction as its main objective, with an emphasis on supporting the Government's efforts towards sustainable economic growth and employment generation. This will be achieved through two specific objectives: (i) improving the conditions for efficient production and incorporating excluded sectors in the productive process, and (ii) increasing human capital in an equitable manner. Institutional strengthening and governance are mainstreamed priorities.
- 1.49 This GEF Project is conceived as a complement to the PDPRBM (GU-L1002), a 6-year investment loan of approximately US\$30 million of which US\$10.94 million will be used as co-financing. The objective of the investment loan is to promote the conservation of the MBR through sustainable use, inclusive and participatory management of natural resources, cultural heritage, tourism activity, and environmental management with a view to improving the quality of life of Petén residents. The Program consists of the following components: (i) Sustainable Management of Natural Resources and the Environment, which, in addition to support for the management of the MBR, includes: (a) management support to four protected areas south of the MBR (411,000 ha), (b) diversification of productive activities in the BZ and the southern part of Peten with an emphasis on families living in extreme poverty with a view of stabilizing the agricultural frontier; (c) pollution control and water quality monitoring in the watershed of Lake Peten Itza (immediately south of the MBR); (ii) Enhancement of Archeological and Other Tourism Sites which includes financing for restoration and rehabilitations of archeological sites and small-scale infrastructure for nature-based and cultural tourism; and (iii) Institutional Strengthening which includes strengthening of local organizations such as the COCODES and local tourism committees, implementation of the municipal action plans, operational decentralization of line agencies such as MARN and INGUAT and a public awareness program on the benefits and environmental services provided by the protected areas of the Petén. The GEF Project fits within the first component of the investment loan and was conceived to complement that Program thematically and geographically. Inter-institutional coordination is a theme underlying both the loan and the GEF Project, and the execution structure that encompasses local governments, COCODES, NGOs, the Regional Board (Mesa Regional) and the High Level Inter-Institutional Committee is key to achieving this coordination (see Section IV. Project Execution).
- 1.50 Neighboring the MBR to the south, and with some specific interventions in selected parks and in the buffer zone, the Ministry of Agriculture, Livestock and Food (MAGA) has been executing the IDB-funded Sustainable Development Program for Petén. It includes restoration of archeological sites (Yaxhá and Aguateca), sustainable natural resource management, systems for environment-friendly agricultural production and regularization of land titles. The Operating Regulations for the GEF Project have incorporated lessons

learned from this project. In addition, the activities in the GEF Project involving the forestry communities in the MUZ, will be complemented by a regional IDB-MIF funded project, which supports the forestry communities in the MUZ in aspects involving processing and marketing of timber.

- 1.51 **The World Bank.** The Land Administration Project has two components, namely: (i) cadastre and regularization of lands in the southern parts of Petén (excluding the CZ and MUZ of the MBR), and (ii) opening a registry office in Petén to modernize management of the registry files. By targeting land tenure issues in the southern part of Petén, this project is expected to contribute to reduce the migration towards the MUZ and CZ of the MBR, thus reducing pressure on its biodiversity and natural resources. The GEF Project is expected to benefit from that project in terms methodologies and information bases. The Japan Development Fund (JDF) of the World Bank is also expected to provide funding for a complementary project to strengthen the forestry concessions in the MBR.
- 1.52 **GEF.** Two GEF projects have recently been carried out in the MBR, from which lessons have been taken: (i) support for the management and protection of the Laguna del Tigre National Park and Biotope (GEF/World Bank), and (ii) strengthening of community management in the Bio-Itza Reserve (GEF/UNDP). The results from the GEF/UNDP enabling activity “Definition National Priorities and Assessment of Capacity Building Needs in Biodiversity in Guatemala” have been taken into account, in particular related to biodiversity information management. Monitoring and research activities of the MBR will be integrated with the systems already established by the Regional Program for Consolidation of Mesamerican Biological Corridor (UNDP/UNEP/WB), which is coordinated by the Central American Commission for Environment and Development (CCAD), and information links will be established with the Inter-American Biodiversity Information Network (IABIN–GEF/WB). Finally, coordination has also been established with the regional GEF/IDB/World Bank project on Integrated Ecosystem Management in Indigenous Communities, which has Petén as one of several priority sites in Central America.
- 1.53 **Other donors.** With US\$40 million invested over almost 15 years, USAID has been the cooperation agency with the largest presence in the area, accompanying the incipient environmental institutional framework from the outset. Although USAID has now largely phased out, it continues to promote sustainable production, in collaboration with The Rainforest Alliance. The international NGOs (TNC, CI, and WCS) also have a long track record of involvement, aimed initially at strengthening local organizations, out of which arose Defensores de la Naturaleza in the PNSL, Propetén in Laguna del Tigre, NPV and Centro Maya in the MUZ, and ACOFOP, accompanying the community forestry concessions. Both TNC and CI are currently planning interventions in the GEF Project area, with which coordination is being ensured, mainly to support ecoregional planning processes (TNC) and territorial interventions (support for community projects, field research, basic infrastructure for management) located in the PNLT (CI). The Wildlife Conservation Society (WCS) is actively involved in monitoring the ecological integrity of the MBR, which will be fully integrated with the monitoring efforts to be financed with the GEF Project. The GTZ and the government of the Netherlands have participated actively in financing the Forestry Action Plan, which promoted the process of community

and industrial forestry concessions, a sustainable management mechanism that has proven successful. At present, the government of the Netherlands is financing a project for institutional strengthening of the SECONAP, with some actions in the Petén region, with which synergies will be ensured (to be defined in the Annual Work Plans), in particular related to the strengthening of the monitoring and information management capacities. Finally, there are a large number of projects with small-scale financing raised directly by environmental or sustainable resource management organizations with bilateral cooperation, or from foundations specialized in environmental funds, biodiversity, aspects related to cultural heritage, or sustainable development actions.

K. Lessons Learned

- 1.54 The foregoing initiatives have yielded valuable experiences and lessons, including evaluations that were used in designing the Project.²² (i) **the role of municipalities:** management and conservation of the protected areas are bolstered through the participation of local governments who are often in a better position to mobilize village efforts; (ii) **participatory process:** before making any decision, however wise it may seem, the local authorities and communities should be given a chance to engage in the process, and not feel that they are being imposed unilaterally; (iii) **educational level and community-based tourism:** training should be provided to the communities and tour operators to ensure the quality of the services, which in turn can guarantee the success of their enterprises; (iv) **organizational level:** before trying to introduce changes in a settlement, it is necessary to achieve community integration so that residents have a shared vision. Cohesive, organized communities will more easily accept conservation projects than the atomized settlements; (v) **co-management:** to ensure success, the rules of co-management should be clear and fully developed among the different actors and the participating organizations must have a mature organizational structure to cope with the challenges faced by CZ; (vi) **informed decisions:** the success of any program depends on the degree of prior knowledge of the different actors involved and effective dissemination; (vii) **industry and the MBR:** Conflicts over sectoral developments policies, such as in the case of petroleum, have exacerbated the negative impacts of industrial development. The interest of companies operating in the zone in conservation processes should be fostered; and (ix) **environmental education:** the environmental education program initiated in Petén should be continued and reinforced, using materials tailored to the context of teachers and students. In addition, experience nationally and regionally has demonstrated the importance of addressing financial sustainability as one of the key aspects of management effectiveness of protected areas.

II. OBJECTIVES AND DESCRIPTION OF THE PROJECT

A. Project Objectives

- 2.1 The **development objective** of the Project is the conservation and sustainable use of the biodiversity of the MBR, with an emphasis on the areas of high biological importance, based on the strengthening of institutional capacity and effective participation of different

²² Lessons were taken from two key documents: Support for the Management and Protection of Laguna Del Tigre national Park and Biotope Project. GEF Implementation Completion Report. September 2002. Summary of Lessons Learned for the Sustainable Development of the MBR. APESA final report. IDB 2006.

interest groups so as to optimize its management. The **global objective** is to contribute to the ecological integrity and connectivity of the Selva Maya, a region highly significant for the biodiversity of Mesoamerica. The **specific objectives** are to: (i) strengthen the institutional arrangements needed for the effective, sustainable, and participatory management of biodiversity in the MBR; (ii) foster the sustainable use of biodiversity in the MBR; (iii) support the implementation and monitoring of policies, standards, and other instruments for managing the MBR; and (iv) contribute to the generation and administration of information for the adaptive management of the MBR.

B. Description of the Project Components

2.2 The Project's time horizon is five years. The GEF Project has the following components: (i) strengthening of the institutional agreements and capacities for the effective management of the MBR and its biodiversity; (ii) incentives for the conservation and sustainable use of biodiversity; (iii) Design and implementation of policies and other instruments for management of the MBR; and (iv) the generation and use of information for the adaptive management of the MBR. These components and their corresponding activities have been selected to address the main threats and root causes of biodiversity loss confirmed and validated during project preparation. The activities of each component are further described below. While many of the activities will be carried out concurrently, the concept is to advance from the outset with capacity building (Component 1) and the financial sustainability mechanisms in order to lay a solid foundation for the execution of the other components.

1. COMPONENT 1: Strengthening institutional agreements and capacities for the effective management of the MBR and its biodiversity (GEF US\$1,060,000; total US\$2,600,000).²³

2.3 Both the PDPRBM (GU-L1002) and the GEF Project include as one of their strategic lines the strengthening of governance, particularly contributing to the process of decentralization, with a view to greater coordination with and participation of communities and local governments. In this component, the GEF Project will direct financing primarily at capacity building for biodiversity conservation of SECONAP and its partners in co-management (activities 1b,c and d) while the loan will focus on building capacity of the other government institutions (e.g., MARN), municipalities and COCODES in natural resources management. The following activities are included:

2.4 **Strengthening institutional capabilities for governance of the MBR (GEF: 0; total: US\$1,500,000).** Mechanisms to support decision-making for the administration and management of the Reserve will be strengthened at three levels: (i) **Local:** including local governments, the Authority for the Management and Sustainable Development of Lake Petén-Itzá (AMPI); and community associations (COCODES). This includes strengthening of municipal environmental units, promoting municipal representation on management committees for CZ and the formulation of urban land use plans for the five municipalities of the MBR; (ii) **Regional:** by reinforcing key sectoral regional offices (MARN, MICUDE/IDAEH, SCEP, and INGUAT) as well as the Mesa Regional; and (iii) **Binational:** by strengthening capacities for implementing binational agreements

²³ The total represents the GEF financing and the co-financing from GU-L1002.

relating to natural and cultural resources, commercial relations and security issues along the borders with Mexico and Belize. The investments related to this activity at the three levels will be made with resources from the PDPRBM (GU-L1002).

- 2.5 **Improving and developing new mechanisms for co-management in core zones, biological corridors, community polygons, and other special use areas (GEF: US\$200,000; total: US\$200,000).** This activity will help extend and implement co-management arrangements proven to be the most effective tools for biodiversity conservation in the MBR. Building on the experience gained with the co-administration agreements in the CZ and the concessions contracts in the MUZ, this activity will support SECONAP partners (ACOFOP, local NGOs) in the following: (i) updating the concession contracts for the management units in the MUZ with a view to improving and standardizing their technical, administrative and operational aspects;²⁴ (ii) adapting and expanding the model for concession contracts for providing conservation services²⁵ in special use zones; (iii) extending and improving implementation of co-administration agreements for the core zones (including the Community Relations Strategy for PNSL); (iv) developing new mechanisms for the co-management of the biological corridors that involve the participation of community organizations and the local private sector.
- 2.6 **Strengthening the operational capacity of the SECONAP in the MBR (GEF: US\$660,000; total: US\$660,000).** In order to strengthen the SECONAP so that it is able to perform its planning, coordination, monitoring and enforcement functions in the MBR, the Project will finance: (i) the re-establishment of the Community Relations Unit, as the main unit responsible for implementing the Policy on Human Settlements. This includes working with local NGOs and municipalities in preparing land use plans in the community polygons with a Cooperation Agreement pursuant to the Policy, establishing inter-institutional agreements for compliance and monitoring of these Cooperative Agreements and generally promoting community consensus in the context of the updated Master Plan for the MBR. The support will include hiring community relations personnel (2 technical, 3 field assistants) for the regional office of SECONAP in Petén, as well as staffing of branches of the Unit for the PNSL and the PNLT (2 technical and 1 field assistant), equipment and on-the-job training in skills such as negotiation and conflict management; (ii) automating the procedures of SECONAP's one-stop window²⁶ with the USEC/CEMEC; (iii) improving SECONAP's capacity for control and surveillance in the MBR (including equipment and logistics) so that the resource rangers can carry out permanent rounds of patrols in collaboration with MARN; (iv) the establishment of control posts (two in the PNLT, two in the PNLT, and one in Yaxhá); and (v) on-the-job training for technical personnel of SECONAP and its partners assigned to the MBR in consensus-building techniques, gender equity, overseeing management and land use plans and supervising biodiversity conservation projects.

²⁴ This includes reforms to concession regulations and support for implementation of the amendments to the contracts based on the evaluation conducted during preparation of the PDPRBM.

²⁵ Tourism, transport, guide, food and lodging services, and others.

²⁶ The Single Window is an administrative instrument of the Executive Secretariat of CONAP that aims to make efficient the process of receiving, reviewing, resolving, and monitoring the requests and cases that come in to the institution.

- 2.7 **Partnerships with the formal education sector in the region for environmental education and skills training (GEF: US\$200,000; total: US\$200,000).** A strategy spanning the entire MBR for raising awareness of and providing environmental education for opinion-makers (media), human resource educators at all levels, and municipal environmental planning units will be implemented. The strategy builds on and promotes coordination and exchange between already existing initiatives such as the Environmental Education Program in the PNLT. To this end, the formal departmental environmental education forum that operated in the past will be reactivated.²⁷ Working closely with the local formal education community, the project will finance the production of educational materials on biodiversity conservation and the local economy to be distributed through schools, municipal offices, NGOs, COCODES and women's and youth groups. These will be complemented by media packets, and interactive learning events (e.g., theater plays, contests) aimed at target groups, including women, youth, and children. A partnership will be established between SECONAP and local universities and other providers of skills training to develop training modules focused on forest products, tourism services, and sustainable commerce. This activity also encompasses the implementation of the Project's communication plan (see paragraph 5.8)
- 2.8 The main results expected from this component are:²⁸ (i) existing contracts updated and new concessions issued for support services in special use zones; (ii) co-management model for the biological corridors in execution and providing new economic opportunities for local residents; (iii) Community Relations Unit in operation and facilitating the implementation of Cooperation Agreements and other provisions of the Policy on Human Settlements; (iv) automated one-stop window of CONAP and the USEC/CEMEC operating; (v) control posts in operation and connected to coordinated patrol circuits of SECONAP and MARN.

2. COMPONENT 2: Incentives for the conservation and sustainable use of biodiversity in the MBR (GEF: US\$800,000; total: US\$7,800,000)

- 2.9 This component will promote the adoption of natural resource use practices for the purpose of diversifying the local economy, generating new income and by doing so, stabilizing encroachment onto protected ecosystems with important biodiversity value. In addition to creating off-farm employment opportunities, a key objective will be to foster the conditions and develop the systems that will make it economically feasible for farmers and other resource users to intensify and diversify production in ways that are environmentally sustainable, thereby helping them to limit pressure on remaining forest. The majority of the funds for this component will come from the PDPRBM (GU-L1002) which will finance activities in the MUZ and BZ to the east of the 90° meridian as well as south of the MBR. The GEF Project will help systematize best practices for these productive activities and will finance innovative investments compatible with the use restrictions of CZs, special use zones, and biological corridors to the west of that meridian. For the preparation of the Program (both the loan and the GEF project), detailed designs and feasibility analyses were undertaken for a representative sample of activities and pilot projects (i.e., non-timber forest products, ecotourism. In addition, an

²⁷ Inter-institutional Coordinating Body for Monitoring the Environmental Education Strategy, CISEEA.

²⁸ See Annex II Logical Framework for a more complete list

exhaustive market study including an econometric model of demand was undertaken for nature-based and cultural tourism in the MBR. The component includes the following activities:

- 2.10 **Innovative investments in the use of biodiversity and environmental goods and services of the MBR (GEF: US\$320,000; total: US\$1,100,000).** This activity will finance small-scale projects aimed at bolstering sustainable alternative livelihoods in the MBR. As a first step, best practices in the sustainable use of biodiversity will be systematized and disseminated through local NGOs. Secondly, technical assistance will be provided to community groups (e.g., producers organizations, women's groups) to develop project proposals eligible for financing on the basis of demand. Eligible projects will include support to commercialization of environmental goods and services, promotion of access to new markets, and support to entrepreneurial development. Based on eligibility criteria including technical and financial feasibility, compatibility with land use zoning, demonstration value, replicability, and timeliness, projects will be screened for financing with a view of providing opportunities for better incomes for the local population and serving as a catalyst for biodiversity conservation. A sample of projects has already been identified as part of the preparation of the PDPRBM. Examples of projects include: (a) reintroduction and reproduction of native plants and wildlife; (b) value added to raw materials produced under certified processes (lianas, seeds), xate nurseries and plantations under natural forest cover; (c) crafts using little-known timber species; and (d) innovative ecotourism support services. While the bulk of the financing for these projects will be provided by the PDPRBM, the GEF resources would be used selectively in the vicinity of the CZ, the biological corridors and special use zones.
- 2.11 **Diversification of forestry products and entrepreneurial training for the administration of concessions (GEF: US\$150,000; total: US\$1,250,000).** This activity will support training and strategic direct investments to local organizations (concessions, community management units, private reserves) in income-generating opportunities aimed at diversifying forest products such as value added and marketing little-known timber products and development of production units for medicinal plants. Building on the results of recent evaluations (see paragraph 1.17), it also includes training in business management and accounting and horizontal exchanges between forestry concession managers for the purpose of transferring experiences from the most successful operations.
- 2.12 **Low-impact nature-based tourism activities and tourism circuits in the CZ, biological corridors and MUZ (GEF: US\$100,000; total US\$4,000,000).** This activity will be carried out in close collaboration with the subcomponent that is to finance the PDPRBM, since the culture-nature interaction is one of the distinctive aspects that most draws tourism to Petén. By pairing communities and tourism operators along circuits that link the core zones and biological corridors, this activity will finance: (i) two small tourism information centers managed through cooperative arrangements and other small-scale public infrastructure such as signs, trails and low-impact access; (ii) horizontal exchanges between communities providing support services for tourism (bird watching, demountable tented camps) to strengthen the circuits and diversify nature-based tourism; (iii) the establishment of Tourism Committees in the communities of Carmelita, Paso Caballos, and Uaxactún; (iv) direct investments for promoting existing tourism routes in the Reserve, especially those linked to the core zones, biological corridors, and/or sites

under community management (such as those visited by boat from Paso Caballos along the Río San Pedro that combine the visit to El Perú with interpretive routes of the surrounding area, from Carmelita along the Maya trails to Tintal, and from Uaxactún to combine Mirador with Río Azul). This includes a 'living culture' museum identified as an initiative by the Itza and where indigenous culture, traditional arts and knowledge can be shared.

- 2.13 **Incentives for sustainable agricultural activities in appropriate areas (GEF: US\$230,000; total: US\$1,450,000).** The investments related to this activity will be made mostly with resources from the PDPRBM (GU-L1002).²⁹ In both the MUZ and the BZ, priority will be given to proposals from families of small producers living in extreme poverty with difficulties when it comes to participating in the labor market and women's organizations. Funds from the GEF Project will be used to systematize and disseminate good practices in sustainable agriculture for the socioenvironmental and legal conditions of the MBR with emphasis on the part of the MBR to the west of the 90° meridian towards the border with Mexico. This activity is also aimed at fostering sustainable agriculture activities (indigenous agroforestry systems, backyard gardens, medicinal plants, selective intensification schemes such as 'green manure', native fruits and vegetables) in strategic sites of the MB (with emphasis on La Pasadita, Las Dos Coloradas, Uaxactún, Carmelita, El Naranjo corridor, cooperatives to the south of the PNSL, and communities relocated outside the national parks, and communities with cooperation agreements).
- 2.14 The main expected results of this component are: (i) microprojects in operation in strategic sites for the conservation and sustainable use of biodiversity in the MBR; (ii) managers of community concessions in the MUZ updated on technical, administrative, and managerial aspects applied to the activities of the concessions; (iii) consolidated nature-based tourism circuits with community-operator partnerships and small-scale infrastructure; (iv) farmers implementing at least one sustainable agriculture practice (plots, orchards).

3. COMPONENT 3: Design and implementation of policies, regulations, and other instruments for the management of the MBR (GEF: US\$920,000; total: US\$1,920,000)

- 2.15 This component help harmonize and improve implementation of public policies directed at the Petén region and in particular to the MBR that pertain to key factors in the loss of biodiversity such as those related to land security, sectoral development policies and the absence of a secure source of financing for conservation activities. The resources of the PDPRBM (GU-L1002) will be directed primarily at the sustainable financing mechanism. Included in this activity are the following:
- 2.16 **Supporting the resolution of land and resource use conflicts³⁰ in the MBR, particularly in the biological corridors and core zones to the west of the 90°**

²⁹ Investments not greater than US\$ 20,000 and for a period of execution not greater than two years.

³⁰ Understanding as land conflicts those disputes over possessions and use right over lands, due to overlapping boundaries and boundary markers, inconsistency between areas registered and area occupied, invasions, all of which create uncertainties in land ownership. CONTIERRA reports as of 2005 a total of 302 cases of land

meridian (GEF US\$400,000; total: US\$400,000). This activity complements the work of the Community Relations Unit already described under Component 1. It consists of determining the legal and registry status of the various zones of the MBR, using to the extent possible previously generated information and available methodologies such as those used in the IDB Sustainable Development Program for the Petén and the World Bank Land Administration Project (see paragraphs 1.50 and 1.51). This process will culminate in the official entry into the National Land Registry of national parks, biological corridors and community-managed units under Cooperation Agreements pursuant to the Policy on Human Settlements.³¹ Boundaries will be mapped and demarcated with benchmarks in the field, prioritizing areas based on ecological and social criteria and beginning with pilot projects that can be replicated to other zones. Advisory services and consensus-building workshops will be financed to implement the “Interinstitutional Letter of Understanding regarding land conflicts” (see paragraph 1.19) in close coordination with the entities that have the mandate for negotiating and resolving disputes over land use (CONTIERRA) and with the active participation of the municipalities affected by these disputes.

- 2.17 **Improving policies, norms and regulations for controlling threats in the MBR (GEF: US\$130,000; total: US\$130,000).** Through this activity policies, norms, standards and regulations governing natural resource use and economic development in the MBR will be improved to reduce ambiguities in their interpretation and harmonized in coordination with relevant sector agencies (e.g., MAGA, Ministry of Mines and Energy, INGUAT) to mitigate conflicts that stem from their enforcement and to mainstream environmental management (e.g., in petroleum and tourism operations, solid waste management). This includes a policy of disincentives to discourage activities that create threats to biodiversity conservation (for example cattle ranching).
- 2.18 **Support the environmental audit and expert assessment functions performed by judicial officers in the MBR (GEF: US\$200,000; total: US\$200,000).** Parallel with the harmonization of the regulatory framework described above, this component will support the application of rules and regulations undertaken by judicial officers in the MBR. This will include the documentation and resolution of strategic cases that arise from illegal activities (for example, usurpation of land in core zones, illegal logging) through environmental audits and independent expert assessments. This will be accompanied by support for the operation of the Office of the Special Prosecutor for Crimes against the Environment in the Petén Region, as part of the Strategy for Environmental Justice and Fighting Impunity.
- 2.19 **Implementing financial mechanisms for the sustainable use and conservation of biodiversity in the Reserve (GEF: US\$190,000; total: US\$1,190,000).** This consists of two activities: (i) a study of the contribution of the MBR and its biodiversity to the regional and national economy to help build the case for a permanent financing

conflicts throughout the department, and 127 conflicts inventoried by the Office at San Benito, which serves the municipalities that correspond to the MBR.

³¹ Priority areas include Mirador Rio-Azul NP, San Miguel La Palatoda Biotope, Cerro Cahui Biotope, Naachun-Dos Lagunas Biotope, Sierra de Lancandon NP, Laguna del Tigre NP, and community polygons such as Carmelita, Uaxatun. Selection criteria include: (i) biodiversity value; (ii) level of threat from encroachment; (iii) absence of cooperation agreements for natural resource use in community polygons.

mechanism, to justify annual budgetary allocations, and as an input for the system of national accounts³²; (ii) implementation of a business plan for the MBR (see financial sustainability section) that will consolidate and/or introduce instruments for capturing funds to finance the recurrent costs of the management and administration of the MBR. Activities include updating the fee system of SECONAP, increasing existing or introducing new tourism-related funds, and negotiating interinstitutional arrangements between SECONAP, INGUAT, IDEAH, Ministry of Energy and Mines, MAGA, MINFIN, and others, to cover the revenues not captured that come from the Fund for the Development of Hydrocarbons, the tax on tourists, and other sources). This will include the establishment of one or several 'Stewardship Funds' (Fondo Patrimonial) for the sustainable use and conservation of biodiversity in the CZs, building on the experience of a similar fund created for Yaxhá in 2005. Past experience with the development and operation of conservation trust funds supported by the GEF will also be examined in establishing the financing mechanisms.³³

- 2.20 The main results of this component are: (i) land and resource use rights in the community polygons, special use zones and biological corridors clarified in accordance with the inter-institutional agreement promoting the resolution of land conflicts in the MBR; (ii) boundaries and geo-referenced boundary benchmarks established in the field for selected zones of the MBR; (iii) at least two national parks and one biological corridor officially registered; (iv) key sectoral policies established for the Petén harmonized to be compatible with biodiversity conservation and with instruments that serve as disincentives to activities that threaten biodiversity within the MBR; (v) at least four strategic cases of law enforcement are on the way to being resolved and procedures documented; and (vi) Business Plan of the MBR launched and at least 20% of recurrent costs of core zones covered by the portfolio of financing mechanisms.

4. COMPONENT 4: Generation and use of information for the adaptive management of the MBR (GEF US\$950,000; total: US\$950,000)

- 2.21 The purpose of this component is to improve the capacities to collect and administer accurate and timely information in order to guide the adaptive management of the MBR. The following activities will be financed:
- 2.22 **Consolidating and improving the exchange of information for the management of the MBR (GEF: US\$ 350,000; total: US\$ 350,000).** This activity will focus on filling certain gaps in the information base, particularly the socioeconomic dimension of biodiversity conservation in the MBR. Data (including maps) on land use, demographic trends, conservation activities and social conflicts under different forms of co-administration³⁴ will be updated using remote sensing images and other sources. It will support follow-up to investigations initiated by SECONAP's Regional Office, other institutions and local NGOs on the socioeconomic situation of the PNLT and the studies done in the PNSL. Inter-institutional agreements assigning specific responsibilities to the different actors involved in data collection and administration will be entered into to

³² This would build on the economic valuation undertaken for Laguna del Tigre in 2004.

³³ GEF Evaluation Report #1-99 Experience with Conservation Trust Funds and GEF Lesson Notes no. 5 and 6.

³⁴ Co-administration, delegation of administration, Resources Management Concession (commercial and industrial), Cooperation Agreement, and Private Natural Reserve, among others.

promote sharing of this information among local, regional, and international organizations.

- 2.23 **Establishing the monitoring and evaluation system of the performance and impact of managing the MBR (GEF: US\$490,000; total: US\$490,000).** This activity will consolidate the baseline of the Project and support periodic monitoring of performance and impact in accordance with the requirements of SECONAP (and its new Monitoring and Evaluation Unit), the Bank and GEF and in coordination with the National Committee for Biological Monitoring. Field measurements will be collected and desk evaluations of indicators of the system agreed upon for the requirements of the GEF and its tools (tracking tool for SP1) will be carried out using, where possible, the already installed capacities of the USEC/CEMEC, collaborating NGOs, universities and beneficiary organizations participating in the project. Technical assistance, training and equipment will be given to the USEC/CEMEC³⁵ to collect data, analyze and report on management effectiveness indicators until now not covered in its routine operations. Support will also be given to disseminate monitoring reports through web pages and other means.
- 2.24 **Developing a research agenda for biodiversity conservation (GEF: US\$110,000; total: US\$110,000).** This activity is aimed at promoting and launching a regional research agenda for the entire MBR. The work would include: (i) establishing an institutional mechanism for establishing priorities for research with the involvement of the scientific community; (ii) commissioning of rapid ecological assessments of core zones and biological corridors; (iii) the evaluation of good practices for sustainable resource use at demonstration parcels; and (iv) the development of bioprospecting and research on issues of adaptive management of the MBR (including thesis studies in collaboration with local universities).
- 2.25 The main results of this component are: (i) a consolidated geo-referenced socioeconomic data base for the MBR; (ii) agreements for improved coordination of data collection and analysis activities; (iii) the monitoring and evaluation system issuing periodic reports on key indicators of management effectiveness and project performance; (iv) at least three rapid ecological assessments of core zones; (v) the research agenda for the MBR designed, with the participation of research agencies in Petén; (vi) at least five regional investigations done on adaptive management.

III. COSTS AND FINANCING

- 3.1 The cost of the incremental activities described above amount to US\$17.6 million, of which the GEF will finance US\$4.06 million, to be administered by the Bank. The PDPRBM (GU-L1002) will provide US\$10.94 million in co-financing. The remaining amount of US\$2.4 million corresponds to associated financing of US\$1.7 million and US\$0.9 million from USAID and Conservation International (CI), respectively. Table III-1 shows the indicative budget distributed by activity and source, excluding USAID

³⁵ CEMEC will continue to serve as the clearinghouse for information on the MBR. The Monitoring and Evaluation Unit of SECONAP will be responsible for analyzing trends as well as exchanging and disseminating the information throughout SIGAP.

and CI. Annex II includes the detailed budget and the additional associated financing from USAID and CI.

TABLE III-1 Budget by Source of Investment (in thousands of US\$)

Components	GEF	IDB-Loan	Total US\$
1: Establishing the institutional agreements needed for the efficient, sustainable, and participatory management of biodiversity in the MBR	1,060	1,540	2,600
2: Support for activities compatible with the conservation and sustainable use of biodiversity in the MBR	800	7,000	7,800
3: Support for the design and implementation of policies, regulations, and other instruments for managing the MBR	920	1,000	1,920
4: Strengthening the generation and use of information for the adaptive management of the MBR	950	0	950
Other Costs			
Administration and Supervision	300	1,300	1,600
Financial Costs		100	100
Audits	30		30
TOTAL	4,060	10,940	15,000

IV. PROJECT EXECUTION

A. Project Execution and Administration

- 4.1 The executing agency for the PDPRBM is the Ministry of Environment and Natural Resources ((MARN) through various participating agencies including SECONAP. Given that the GEF Project is part of the PDPRBM, its execution scheme will be completely integrated within that Program. The MARN would therefore assume the full administrative, financial, and management coordination responsibilities vis-à-vis the Bank and the GEF for both operations. As a participating agency, SECONAP would assume the day-to-day technical responsibility of the GEF Project through an inter-institutional agreement with MARN. The MARN will set up a Program Unit (UP) charged to the funds of the PDPRBM and with technical liaison personnel from SECONAP and other co-executing agencies. This UP will ensure the technical coordination of all activities, be responsible for undertaking and overseeing procurement processes related for the execution of these activities, and will supervise the physical and financial progress of all activities and works for both operations. Eligibility of the GEF Project will be conditioned on eligibility of the PDPRBM as it is dependent on the loan for its execution structure and co-financing.
- 4.2 This execution scheme has been approved by the Ministry of Finance (MINFIN) and the High Level Inter-Institutional Committee (*Comité Interinstitucional de Alto Nivel CIAN*) which includes the Presidential Commissioner for Peten, the Ministry of Energy and Mines, and the Ministry of Defense as well as the agencies participating in the PDPRBM (MARN, SECONAP, MICUDE/IDAEH, SCEP, MAGA and INGUAT). The execution scheme strengthens the government's on-going initiatives towards deconcentration and decentralization by providing for the participation of local governments and community organizations in the execution arrangement. To this end, the existing structures such as local governments, the COCODES, and other existing community organizations will

have opportunity to contribute to the annual planning, project design and review cycle. In addition, the existing Regional Board (*Mesa Regional*) currently functioning as a participatory consultation forum on development policies affecting the MBR would serve as an advisory body to the UP. For the purposes of the Program, membership of the Regional Board will be broadened to include more representatives from community organizations within the RBM and in the southern Peten area.

- 4.3 The budgetary space (*espacio presupuestario*) that the Program and the GEF Project need in order to be executed will be given to the MARN in its entirety. This will be established in the inter-institutional agreements signed with the participating agencies along with their responsibilities. A common set of Operating Regulations guiding the execution of the PDPRBM and the GEF Project are currently under preparation. These Operating Regulations, to be approved by government, will establish the rules and procedures for each component, eligibility criteria for demonstration and pilot projects, the procedures for preparing the Annual Institutional Action Plans (AIPs) and Annual Operational Plans (AOPs), procurement procedures, and the methodology for evaluation and monitoring of the AIPs and AOPs. Approval of the Operating Regulations will be a condition prior to first disbursement.
- 4.4 The UP as an entity under the MARN would be located in the Petén for operational purposes, with a small office in Guatemala City for liaison purposes. Its main functions will be: (i) coordinating and managing the process of executing the Program, including the hiring of consultants and contractors for all its components; (ii) administering and supervising the activities related to execution; (iii) organizing presentations of products to the MARN and participating agencies including SECONAP; (iv) providing ongoing assistance to the COCODES and other community organizations to prepare their respective AIPs; and (v) preparing and supervising the execution of the inter-institutional agreements to be signed with the participating agencies.
- 4.5 The UP will consist of an Executive Director (directing the project planning process, serving as liaison among those involved, and overseeing execution of the Program), and a support team (made up of a limited number of technical and administrative support staff). The UP will include two additional positions to be charged to the GEF Project: a Technical Director directly responsible for the GEF Project and a project specialist assigned to the planning and supervision of activities to be financed by GEF resources. The selection of the Technical Director will be a condition prior to first disbursement. The Technical Director will be provided the basic support from the UP for all administrative and financial aspects.
- 4.6 The SECONAP, MARN, INGUAT, MICUDE/IDAEH, MAGA, Energy and Mines, and SCEP will continue to participate in the High-Level Inter-Institutional Committee (CIAN)³⁶ institutionalized by governmental decree to act as an oversight body for PDPRBM including the GEF Project. CIAN is meant to serve as a forum to ensure regular, informed exchanges between agencies that have jurisdiction on the MBR to ensure coherence in sectoral policies. The Committee is chaired by SCEP. This

³⁶ An Ad Hoc Committee composed of the same members already exists and has been participating in the formulation of the PDPRBM.

Committee will be responsible for inter-institutional coordination on all policy matters related to the project, will be the highest instance of approval of the POA and will oversee the development of the Business Plan. This Committee may call on representatives of the different government portfolios to its meetings should issues arise specific to their institutional mission.

B. Procurement of Goods and Services

- 4.7 The procurement of goods and services will follow the Bank’s policies GN-2349-4 and GN-2350 for contracting, and the procurement plan prepared for this project. The limits on the amounts for the contracts are shown in the following table.

Table IV-1 Limits on Contracts (in US\$1,000)

Type	International Public Biddings	National Biddings	National Private Biddings	Direct Contracting
Consulting Services	≥200	≥100 y < 200	≥10 < 100	<10
Goods	≥ 150	≥100 y < 150	≥10 < 100	<10
Works	≥1500	≥150 y <1,500	≥10 < 150	<10

C. Disbursement Periods

- 4.8 The disbursements will be for 60 months counting from the entry into effect of the contract. The tentative timeline for disbursements is shown in the following table.

Table IV-2 Indicative of Disbursements (in thousands of US\$)

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total	%
GEF	800	1,000	900	800	560	4,060	23%
IDB Loan	1,000	2,900	3,500	3,000	540	10,940	62%
Other Co-financing	520	520	520	520	520	2,600	15%
Total	2,320	4,420	4,920	4,320	1,620	17,600	100%
Percentage	13%	25%	28%	25%	9%	100%	

D. Monitoring and Evaluation

- 4.9 Component 4 of the project “*Strengthening the generation and use of information for the adaptive management of the MBR*” includes a series of activities that will enable the monitoring and evaluation of the Project’s performance and impacts as well as the status of the MBR. The activities are incorporated in a Monitoring and Evaluation Plan presented in Appendix F. The monitoring and evaluation system will rely on a set of indicators that make it possible to monitor the ecological and socioeconomic conditions of the reserve (with emphasis on ecological integrity, connectivity, biodiversity, sustainable use and threats), and the impacts of the various conservation and management efforts carried out in the context of its administration. Indicators are also included for monitoring the Project’s progress in terms of execution in a manner consistent with the requirements of the GEF and its tools for monitoring its strategic priorities (SP1).³⁷ These indicators have been incorporated to the Logical Framework presented in Annex A. The baseline constructed during the preparation of the PDPRBM will be completed and consolidated into existing information systems using the installed capacity of USEC/CEMEC and the various NGOs involved in the collection and analysis of data on the RBM.

³⁷ Tracking tool for GEF Biodiversity Focal Area Strategic Priority One: “Catalyzing sustainability of Protected Areas”

- 4.10 The monitoring and evaluation system will function within SECONAP in the newly established Monitoring and Evaluation Unit (USEC) and CEMEC as well as shared with partners in management such as the Foundation Defensores de la Naturaleza, WCS and ACOFOP. The existing information system managed by USEC/CEMEC will be adapted to handle all monitoring and evaluation data. Products generated by this system will facilitate the annual planning, monthly programming, and programmatic supervision of Project execution, by component and activity (including environmental, socioeconomic, technical, and financial aspects), as well as the annual, mid-term, and final evaluations to determine progress in attaining the objectives and results defined in the Project's logical framework. The products generated by the information system will be disseminated and shared periodically with all the relevant actors, including financing institutions, for the purpose of strengthening decision-making processes and coordination in the management of the MBR. The total estimated cost for the monitoring and evaluation system is US\$400,000 over 5 years.
- 4.11 A mid-term evaluation will be undertaken once 35% of the GEF resources have been disbursed, so as to allow for, if necessary, adjustments in the approach to execution and/or targets. A final evaluation will also be carried out at the end of the period of Project execution. This final evaluation will include the analysis of lessons learned and a description of the best technical, institutional, and social practices applicable to the future actions for management of the MBR, as well as the most outstanding experiences of restoration and declaration of biological corridors.
- 4.12 In addition to assessing progress and results, both the mid-term and the final evaluation will place special emphasis on the following considerations: (i) How is the Project contributing to decentralized and participatory management of the CZ, the biological corridors and special use zones of the MBR? (ii) What progress has been made towards ensuring the financial sustainability of biodiversity conservation and management activities in the MBR? (iii) To what extent have communities internalized and diversified the sustainable use of biodiversity and good practice in its productive activities and what types of socioeconomic benefits are being generated? (iv) Are management decisions being made on the basis of the best available and accurate information? and (v) What are the trends observed in the ecological integrity and biodiversity of the MBR and how is the Project contributing to maintaining them? The results of the evaluations of Project execution, lessons learned, and best practices will be widely disseminated and shared with actors from the local and national governments, strategic local allies, co-financing agencies, and other relevant actors nationally, regionally, and internationally, including similar efforts financed by the GEF.

V. BENEFITS, FEASIBILITY AND RISKS

A. Benefits

- 5.1 Execution of the project will result in significant global, national and local benefits, including contributing to the maintenance of the Reserve's ecological functions, safeguarding a diversity of forest and associated ecosystems, of which some are unique and unfragmented, and protecting plant and animal species including significant breeding populations of mammals and birds and several threatened, endangered and endemic

species. Globally, the project is expected to contribute to the ecological integrity of the Selva Maya, the most extensive tropical broadleaf forest remaining in Central America. Although difficult to quantify, global benefits are expected to include carbon sequestration based on the results of a recent study conducted to quantify the potential of the forestry concessions to reduce CO₂ emissions. Global benefits will also be generated through the enhanced management of two Ramsar sites, including one that encompasses the greatest concentration of freshwater wetlands in Mesoamerica. The project will also contribute to achieve regional objectives by enhancing the connectivity and promoting replication of best practices to other portions of the Selva Maya in Mexico and Belize as well the Mesoamerican Biological Corridor. Nationally, the project will help consolidate the SIGAP by improving and expanding co-management models to a network of core zones and biological corridors that encompass 75% of the national protected area system, by strengthening key capacities for management effectiveness including consensus building, conflict management, monitoring and evaluation and by leveraging a permanent stream of revenues that can be used for managing the Reserve as a system. Locally, the Project will promote alternative productive activities compatible with the biodiversity conservation objectives of the Reserve, thereby reducing resource use conflicts. The clarification of the legal status of various zones of the MBR will also contribute to enhanced land use security.

B. Feasibility

- 5.2 **Institutional.** The following circumstances contribute to the Project's institutional feasibility: (i) the emphasis placed on strengthening SECONAP and its comanagement arrangements with its existing and new partners to ensure greater presence in the MBR, including improved community relations; (ii) implementation of a genuine process of citizen participation and decentralization building on the practical experience of the forestry concessions; (iii) formalization of the High-Level Inter-Institutional Committee as a proven forum to discuss and coordinate sectoral policies and actions in the context of the Project, including bringing to the forefront matters related to oil production activities, cattle raising, tourism and other economic activities of the MBR; and (iv) the installed capacity of USEC/CEMEC as a center operating from Petén and dedicated to monitoring and evaluation of environmental indicators. The recent creation of the SECONAP Monitoring and Evaluation Unit will also contribute to the timely incorporation of the practical experience gained in biodiversity conservation and management, thus enabling replication to other areas within the national system of protected areas and contributing to overall institutional viability.
- 5.3 **Financial.** Recent evaluations of experiences in sustainable financing of protected areas³⁸ highlight the need to diversify the portfolio of sources of funds to reduce the risk that conservation activities might be financially unsustainable. With this in mind, the financial sustainability strategy of the MBR has been divided into two sections. First, establishing a Stewardship Fund (Fondo Patrimonial) for the MBR. Second, the design and implementation of a Portfolio of Financing Mechanisms for the initial capitalization of the fund and to provide a stable revenue stream, which, supplemented by interest from the stewardship fund, would make possible the effective conservation of the MBR. In

³⁸ IUCN-The World Conservation Union. August 2005. Sustainable Financing of Protected Areas: A global review of challenges and options.

order to integrate these two components of the Financial Sustainability Strategy, activity 3.e of the GEF Project foresees the development of a Business Plan of which some elements appear in Annex G. The Business Plan, which will have the endorsement of the High-Level Institutional Committee, will be the financial instrument for supporting the adaptive management of the Reserve and will help ensure a match between needs and funding sources for conservation activities. In order to generate financial projections for the various mechanisms factoring in their feasibility, an analysis was undertaken of the revenues that could be generated with the implementation of the Business Plan. This analysis indicates that a fund in the order of US\$4.5 to US\$6.5 million could be established by 2011, thereby generating sufficient resources to cover basic recurrent costs for managing the Reserve. Additional contributions to the Stewardship Fund could eventually come from different institutions, including international organizations, foreign governments, and the private sector. This plan is not an end in itself, but a means of facilitating co-administration of the MBR and of communicating with the national and international donors. Annex G presents the results of the analysis undertaken for preparing the Project.

- 5.4 An important proportion of the Project's activities imply recurrent costs that will require continued financing such as operation and maintenance of equipment and salaries of personnel. During the preparation of the Project, SECONAP and MINFIN agreed to plan for yearly increases in budget starting from zero increase at the start to an increase to cover the total amount of recurrent costs by the end of the project.
- 5.5 **Social and Environmental.** The social viability of the GEF Project is the result of processes initiated and developed in the period immediately prior to it (2001-2005) during which SECONAP and the entities that co-administer the CZ of the MBR have taken steps to overcome the traditional confrontation with the communities in these areas, and to build a new relationship, in an effort to harmonize the objectives of conservation and human development of the local population. The Project will consolidate these processes by providing solutions to conflictive issues such as rights to land and resource use, paving the way for a strategic partnership with the local population around the objectives of biodiversity conservation. The involvement of local NGOs with a track record in working with communities and the emphasis on communities learning from each other also enhance the social dimension of the project. The re-establishment of the Community Relations Unit of SECONAP as well as the selection of activities and investments derived from a participatory process to identify local priorities are other factors that contribute to the social viability of the Project.
- 5.6 As stated above, the Project will contribute to a series of environmental benefits which translate to positive impacts such as i) improvements in the on-site capacities to manage the MBR, including planning and supervision, monitoring, surveillance, the implementation of policies based on consensus, environmental education and applied research; (ii) conservation of biodiversity as an integral part of the local economy and the production of goods and services; (iii) secure legal status of the core zones and biological corridors; and (iv) maintenance of the ecological integrity of ecosystems of regional and global importance. Significant negative impacts are highly unlikely given the scale, nature and location of the small pilots projects to be financed in some of the components. Nonetheless, the Project's Operating Regulations will include eligibility criteria for the

environmental and social sustainability for the selection of these small projects and for preventing any temporary impacts that might arise in execution.

C. Consultation and participation

- 5.7 An in-depth socio-cultural analysis and a complementary socio-economic analysis were undertaken as the basis for the stakeholder participation process³⁹. These two studies enabled the IDB project team to identify key local organizations (including indigenous representatives) that needed to be consulted and involved in project design. A wide range of stakeholders who direct, participate actively in, and/or impact on the management of the MBR were involved at various stages of the process. In addition to field visits, a series of consultation workshops were held in 2004 and 2005 with the main objective of introducing the concept of the PDPRBM and the GEF Project and to gain a local perspective on priorities for the management of the MBR. These workshops helped stakeholders identify specific opportunities for promoting sustainable use and conservation of biodiversity in communities located in the vicinity of the CZ, in the MUZ and BZ. The workshops also confirmed the need to adopt a participatory approach customized to the cultural conditions of the MBR in order to ensure effective and sustainable management of the MBR. Two consultation workshops were also held in 2006 to set validate the threat and root cause analysis as well as set priorities for the activities to be financing by the GEF Project. The first of these was held with the personnel from SECONAP and their key partners in the administration of the MBR, in Petén, and the second with personnel from the central office of SECONAP in Guatemala City. In addition to the workshops, bilateral meetings were held with SECONAP, MINFIN, SCEP and other government institutions, co-administrator entities of specific areas of the MBR, and representatives and technical staff of non-governmental organizations and social organizations.
- 5.8 The Project's execution will be accompanied by a comprehensive communication plan cross-cutting each component. This strategy's objective is to inform and promote effective participation of stakeholders in execution and to identify windows of opportunity for local actors to provide feedback. It encompasses the full spectrum from promoting local awareness and environmental education through formal and informal channels, informing the public at large of progress and lessons learned, and involving local organizations in the planning, monitoring and evaluation cycle of the Project.

D. Risks and How to Address Them

- 5.9 The execution of the Project faces several risks that have been analyzed during preparation to identify ways to mitigate them. The main risk is the limited **management capacity** and sporadic presence of the institutions responsible in the MBR. This risk is mitigated by the activities in Component 1, through a combination of capacity building and expansion of co-management arrangements to extend the coverage of management activities in a cost-effective manner. In addition, risks associated with potential delays in execution will be minimized by a gradual sequencing of activities in line with the

³⁹ Report on social actors of the MBR. Luis Jose Azcarate. March 2004; Socio-economic analysis. Improving Management Effectiveness of the MBR. Abt Associates. February 2006.

capacities of organizations that have prior experience with similar projects, early engagement of communities and decentralized management.

- 5.10 The conditions of **social and political instability** in the MBR also constitute a risk to the operation. This risk is mitigated by the decentralized governance structure to receive support through the IDB loan and the emphasis on the participation of key stakeholders including the municipalities and COCODES in the project planning, monitoring and evaluation cycle.
- 5.11 The **annual budgetary allocation** (*espacio presupuestario*) and dependence on government annual funding for recurrent costs until financial sustainability mechanisms are in place also represents a risk. This risk will be managed through (i) close monitoring of the annual budgetary process to ensure that the required allocation is planned for in advance; (ii) the gradual phasing in of government financing of recurrent costs during project execution and (iii) early endorsement of the Business Plan in Year 1 of the project to leave sufficient time for its implementation.
- 5.12 Finally, potential delays in the approval of the PDPRBM (GU-L1002) could delay launching of the Project. Efforts are underway to ensure the approval of the loan by the end of 2006, which would help synchronize the start-up of the loan and Project.⁴⁰ Eligibility of the GEF grant will be conditional on loan eligibility to further reduce the risk of gaps in execution.

⁴⁰ Since submission of the GEF Project on September 27, the Government of Guatemala has officially requested the appraisal mission for the loan now scheduled for approval by late December 2006.

Figure 1: Location of the MBR

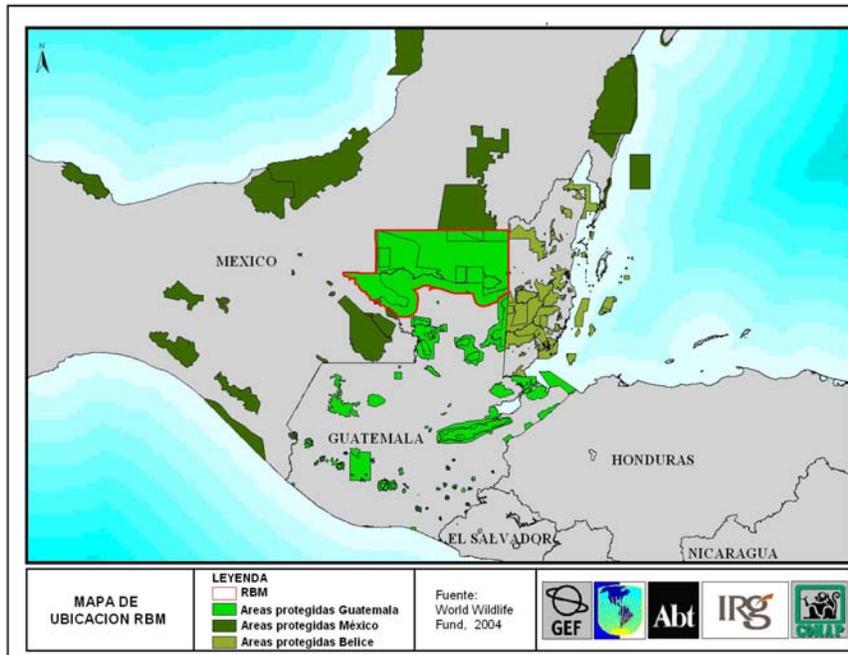
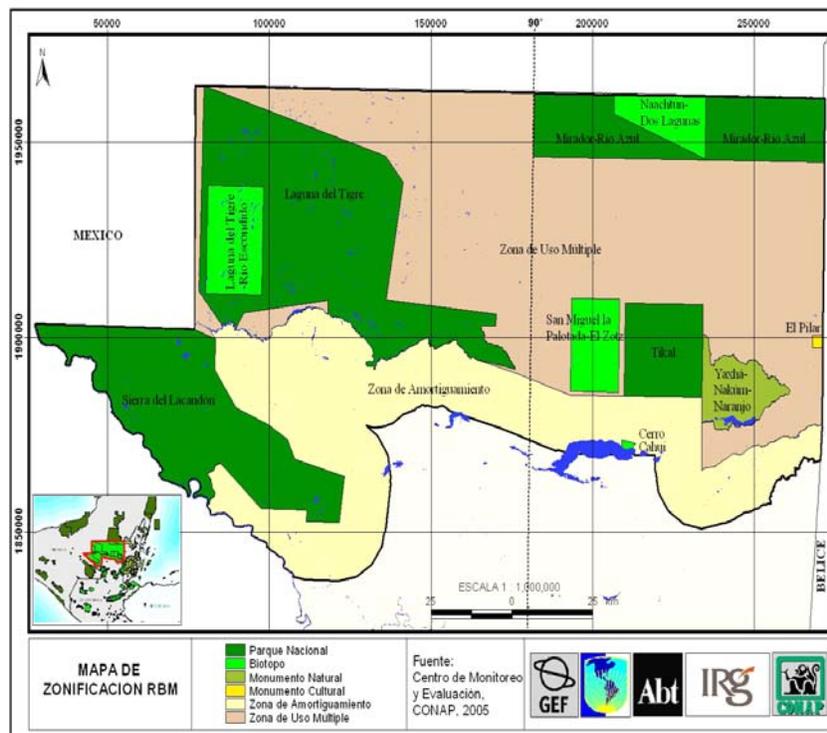


Figure 2: Zoning of the MBR



DETAILED BUDGET BY SOURCE OF INVESTMENT (IN THOUSANDS OF US\$)

Components/Activities	GEF	IDB-Loan	Total US\$ thousands
Component 1: Strengthening institutional agreements and capacities for the effective management of the MBR and its biodiversity	1,060	1,540	2,600
<i>Activity 1.a: Strengthening institutional capacities for governance of the MBR.</i>	0	1,500	1,500
<i>Activity 1.b: Improving and developing new mechanism for co-management in core zones, biological corridors, community polygons and other special use areas.</i>	200	0	200
<i>Activity 1.c: Strengthening the operational capacity of the SECONAP in the RBM.</i>	660	40	700
<i>Activity 1.d: Partnerships with the formal education sector in the Region for environmental education and skills training.</i>	200	0	200
Component 2: Incentives for the conservation and sustainable use of biodiversity in the MBR	800	7,000	7,800
<i>Activity 2.a: Small innovative investments in the use of biodiversity and environmental goods and services of the MBR.</i>	320	780	1,100
<i>Activity 2.b: Diversification of forestry products and entrepreneurial training for the administration of concessions.</i>	150	1,100	1,250
<i>Activity 2.c: Low-impact nature-based tourism activities and tourism circuits in the CZ, biological corridors and MUZ.</i>	100	3,900	4,000
<i>Activity 2.d: Incentives for sustainable agricultural activities in appropriate areas.</i>	230	1,220	1,450
Component 3: Design and implementation of policies, regulations, and other instruments for the management of the MBR	920	1,000	1,920
<i>Activity 3.a: Supporting the resolution of land conflicts in the MBR, particularly in the biological corridors and core zones to the west of the 90° meridian.</i>	400	0	400
<i>Activity 3.b: Norms and regulations for controlling threats in the MBR.</i>	130	0	130
<i>Activity 3.c: Support the environmental audit and compliance monitoring performed by judicial officers in the MBR.</i>	200	0	200
<i>Activity 3.d: Implementing financial mechanisms for the sustainable use and conservation of biodiversity in the Reserve.</i>	190	1,000	1,190
Component 4: Generation and use of information for the adaptive management of the MBR	950	0	950
<i>Activity 4.a: Consolidating and improving the exchange of information for the management of the MBR..</i>	350	0	350
<i>Activity 4.b: Establishing the monitoring and evaluation system of the performance and impact of managing the RBM.</i>	490	0	490
<i>Activity 4.c: Developing a research agenda for biodiversity conservation.</i>	110	0	110
OTHER COSTS	300	1,400	1,700
Administration and Supervision	300	1,300	1,600
Financial Costs		100	100
Audits	30		30
TOTAL	4,060	10,940	15,000

Summary of other sources of financing by source of investment (in US\$)

Components/Activities	USAID	CI	Total US\$
Specific Objective 1: Foster the Establishment of the Institutional Arrangements necessary for the Effective, Sustainable, and Participatory Management of Biodiversity in the MBR		165,000	165,000
Specific Objective 2: Strengthening the Integrated Management and Sustainable Use of Biodiversity in the MBR	1,300,000	350,000	1,650,000
Specific Objective 3: Supporting the design, implementation, and monitoring of policies, standards, and other instruments for managing the MBR	200,000	385,000	585,000
Specific Objective 4: Strengthening the generation and administration of information for the management of the MBR	200,000		200,000
TOTAL	1,700,000	900,000	2,600,000